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## **Results of the Navy Telework and Technology Survey**

**Zannette A. Uriell  
Evangeline M. Clewis**



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# Results of the Navy Telework and Technology Survey

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<b>13. SUPPLEMENTARY NOTES</b>				
<b>14. ABSTRACT</b> In October 2008, a sample of active component Navy personnel was invited to participate in a survey to gather their attitudes towards teleworking and their use of a variety of technologies that might be used to telework, including personal computers, social networking, and personal cell phones. In addition, those who provided their cell phone numbers on the survey were sent a short survey through text message, the first Navy-wide effort to survey through text message. Results show that most Sailors are interested in teleworking, and about one-third of Sailors (almost half of the youngest Sailors) say teleworking would motivate them to stay in the Navy. Most have access to personal computers away from work, predominantly with high-speed internet access. E-mail is the most common social contact method, but almost all young Sailors have their own social networking webpage (e.g., Facebook, MySpace) as compared to only about 30 percent of the oldest Sailors. Most have access to cell phones with text messaging, with younger Sailors most likely to have sent 50 or more text messages in the last 30 days. Results suggest that efforts to enable teleworking should continue, and that Navy leadership should determine techniques to utilize social networking sites within the Navy.				
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## Foreword

In 2008, the Office of Naval Research (ONR) funded the Personnel Integration of Selection, Classification, Evaluations, and Surveys (PISCES) effort to address three deficiencies: (1) reliance on independent, single use measures for assessing the Navy Total Force; (2) lack of measures to classify and select individuals for team assignments; and (3) lack of integration of tools to measure and predict Navy Total Force performance. One objective of PISCES to alleviate the first deficiency was to develop a set of data collection alternatives that could be used to gather data in new and innovative ways.

This report provides results for a survey conducted as part of the Data Collection Alternatives project of PISCES. The primary goal of the survey was not the survey results per se, but the survey as a tool for launching a Lightning Poll, a text-messaging based option for data collection (for more details on a Lightning Poll, see NPRST TN-09-6 [which discussed the background of and the mechanics to a Lightning Poll] and NPRST AB-09-2 [which provides results of the first Lightning Poll conducted of Navy recruiters]). However, the survey was crafted to meet a secondary goal of providing other possible avenues for data collection, which might be utilized in future projects. Because these technologies were seen as also being relevant to work being undertaken regarding telework, the Task Force Life/Work (N134) was asked to partner in the survey process and questions were added to address some of their needs at the time of survey administration. This report covers the results of the entire survey as well as the Lightning Poll that was launched from within the survey.

The authors thank those who took the time to participate in the Telework and Technology Survey, and especially those who also completed the accompanying Lightning Poll. In addition, the authors thank LT Hope Brill and Ms. Stephanie Miller for their sponsorship of the surveys.

David M. Cashbaugh  
Director



# Executive Summary

## Purpose

There currently is limited knowledge about technologies that are used by Navy personnel when not at their Navy job. These technologies may be capitalized upon to enable teleworking as well as provide new channels of information sharing. The Navy Telework and Technology Survey was sponsored by the Office of Naval Research as part of the PISCES Project. This first of its kind survey was designed to provide baseline data about what technologies Navy personnel currently use outside of work as well as provide their attitudes towards telework and technology in general.

## Approach

A random sample of active component personnel was selected for participation in the Navy Telework and Technology Survey, stratified by age groups (Millennials, 27 years of age and under; Generation X, 28 to 43 years of age; Baby Boomers, 44 years of age and older). Letters were sent to those selected inviting them to participate in an on-line survey at the included web address. Letters also included a unique user identification code that would allow for one completion per person. Within the survey itself, a question asked if respondents would be interested in participating in a short (5 questions) survey by text message (known as a Lightning Poll).

## Findings

Over 3,000 respondents provided useable data to the Navy Telework and Technology Survey, yielding a weighted response rate of 27 percent. The margin of error for all respondents was  $\pm 2.5$  percent for the overall questions.

Results show that nearly one-fourth overall have teleworked at least one day at their previous or current shore command, with only 18 percent of Millennials having teleworked. Almost three-fourths are interested in telework (regardless of generation), and half say the ability to telework would motivate them to stay Navy (ranging from 48% of Millennials to 37% of Baby Boomers). Sixty percent of Generation X and Baby Boomers are likely to have done something for their Navy job on a non-work computer in the last 30 days.

Findings related to technology use show that Millennials and Baby Boomers are the most dissimilar in their uses of technology, while Generation X may be similar to Millennials, similar to Boomers, or dissimilar from both. Nearly 90 percent of Millennials have visited social networking sites in the last 30 days; 88 percent of Millennials but just 30 percent of Baby Boomers have their own social networking page. Just over half are satisfied with their Navy work computers and primary computer networks. Over 40 percent of respondents agreed to take a Lightning Poll as well, with nearly all who took it saying that it was easy to do. Over three-fourths believe that the technologies discussed in the survey have improved their ability to do their Navy jobs.

## Recommendations

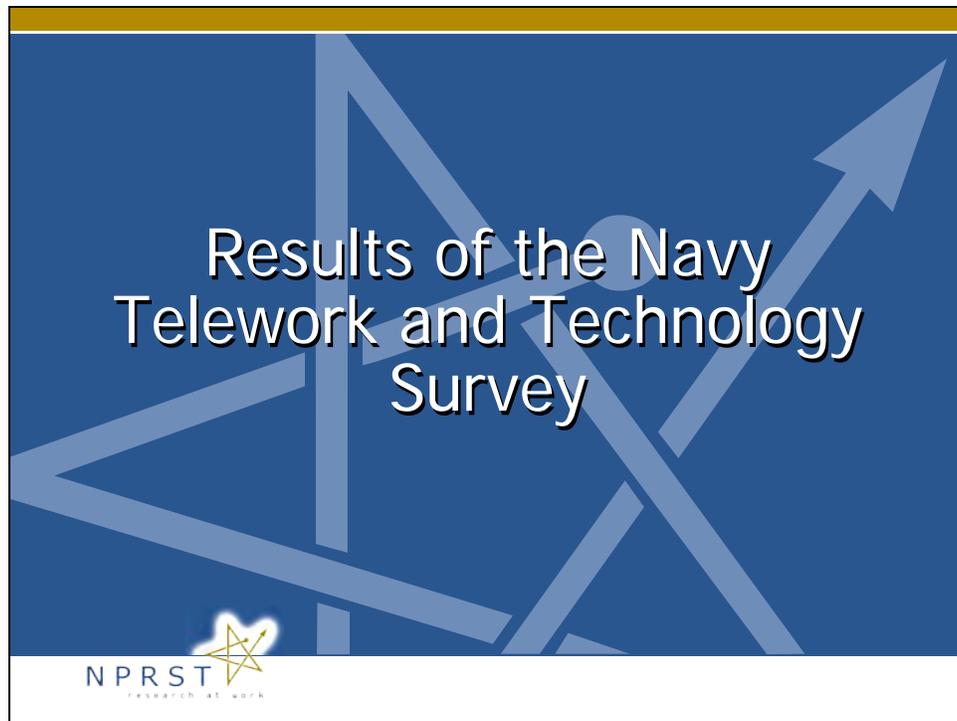
Based on the results of the survey, a number of recommendations are offered:

1. Release a news article about the results and next steps in using technologies for telework.
2. Provide results to relevant entities, including DoN Chief Information Officer (CIO) and the Bureau of Naval Personnel IT/IM Requirements Branch (N16) (for IT-related findings) and to Navy Recruiting Command (NRC) (for knowledge about recruiting Millennials).
3. Continue efforts to enable teleworking for all age groups; provide additional guidance to COs about how to facilitate teleworking on non-standard workweeks at all commands.
4. Determine techniques to utilize social networking within the Navy.
5. Investigate the possible use of cell phones and text messaging as a Navy information channel.

# Contents

<b>Results of the Navy Telework and Technology Survey .....</b>	<b>1</b>
Telework Background .....	3
Technology Background .....	4
Generational Boundaries .....	5
Generational Counts.....	6
<b>Method and Response Rates .....</b>	<b>7</b>
Analysis Key .....	8
Demographics .....	9
Survey Highlights.....	10
<b>Attitudes Toward Telework .....</b>	<b>12</b>
Telework.....	13
Telework Impact on Retention .....	14
<b>Enabling Technologies .....</b>	<b>15</b>
Personally Owned Technology .....	16
CAC Reader .....	19
Social Networking .....	20
Uses of Social Networking.....	22
Audio Networking .....	23
Video Networking.....	24
Other Online Activities .....	25
Work Computer Satisfaction .....	28
Navy Internet Initiatives .....	31
Personal Digital Assistant Capabilities.....	33
Cell Phones.....	34
Lightning Poll.....	40
<b>Attitudes Toward Technology.....</b>	<b>42</b>
Beliefs About Technology .....	45
Giving False Information Online.....	47
<b>Overall Summary .....</b>	<b>48</b>
<b>Recommendations .....</b>	<b>52</b>
<b>References .....</b>	<b>59</b>
<b>Appendix A: Executive Summary Brief .....</b>	<b>A-0</b>
<b>Appendix B: Results of Text Message Survey .....</b>	<b>B-0</b>
<b>Appendix C: Navy Telework and Technology Survey .....</b>	<b>C-0</b>

**Appendix D: Notification and Reminder Letters ..... D-0**  
**Appendix E: Lightning Poll Questions .....E-0**



In 2008, the Office of Naval Research (ONR) funded an effort to create an integrated toolbox of data collection methodologies. One portion of this effort investigated the use of text messaging and similar “new” technologies (see also Uriell & Clewis, 2009a, 2009b).

Because these technologies can be tapped for teleworking efforts currently underway in the Navy (CNO, 2007), the two issues were paired into a single survey, the Navy Telework and Technology Survey, administered in late 2008 and early 2009.

This annotated brief, and the executive summary included in Appendix A, provides results of this first-ever survey conducted to obtain data that would explore the balance between work and life by asking participants to provide their opinions regarding teleworking and their use of various technologies.



## Contents

- Background
- Method
- Survey Results
  - Telework
  - Enabling Technologies
  - Attitudes Toward Technology
- Overall Summary
- Recommendations

This annotated brief describes the background and the methodology used in conducting the research. The results are presented in three sections; the first assesses the usage of and interest in telework, the second addresses the various types of technologies used by Navy personnel, and the last addresses the attitudes of Sailors towards the technology of today. A summary of the findings and recommendations are included based upon the survey results.

## Telework Background

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- In 2000, Public Law 106-346, §359, indicated that all executive agencies needed to introduce policies for telecommuting
- Telework can be defined as “the ability to do your work at a location other than your ‘official duty station’”
- Task Force Life/Work (N134) has been promoting the use of telework in the Navy
  - N1 policy released in October 2008; CHNAVPERSNOTE 5330, Total Force Telework Program
  - Virtual Command Pilot Program implemented in late 2008 (NNS081230-03)

The idea of telework has become more prominent as advances in computer technology have allowed people to connect to “work” while not physically there. The idea was refined for government sector workers in 2000 through Public Law 106-346, §359, which indicated that all executive agencies had to introduce policies for telecommuting; these policies have taken on additional importance in light of recent health (H1N1) and weather (record-breaking snow) developments (GAO, 2009; Norfleet, 2010). The law also defined Telework as “the ability to do your work at a location other than your ‘official duty station.’”

The Navy’s Task Force Life/Work (N134) has been promoting the use of telework within the Navy. Due to their efforts, the Total Force Telework Program was announced in October 2008 with the release of CHNAVPERSNOTE 5330 (CNP, 2008), and, during that same year, the Virtual Command Pilot Program was implemented as discussed in NAVADMIN 340/08 (CNO, 2008) and Navy NewsStand article NNS081230-03 (NPC, 2008); since its implementation, the Virtual Command Pilot Program has been recognized as “Best New Telework Initiative” (Zimmerman, 2009).

## Technology Background

- In FY08-09, Office of Naval Research funded the PISCES initiative to look at alternative methods of data collection
  - Determination of what technologies may be useable for new and enhanced data collection (e.g., virtual focus groups through social networking sites, text message surveys)
- Current survey:
  - First ever Navy-wide look at telework interest and technology use
  - Most extensive Navy survey of generational age groups ever conducted

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In 2008, ONR funded the Navy Personnel Research, Studies, and Technology division to look into data collection alternatives as part of the Personnel Integration of Selection, Classification, Evaluations, and Surveys (PISCES) effort. Some alternatives that were tested were conjoint analysis studies and surveys by text message.

The current survey had two purposes in terms of technology. It was the first Navy-wide look at use of technologies that could be used for teleworking or for innovative methods of collecting data, and was designed to allow for generational comparisons of that use. In addition, the survey functioned as a notification method for the first known Navy-wide survey by text message; those respondents who provided their cell phone numbers in response to a survey question became participants in the text message survey (for results of the first Navy survey of text message, conducted of Navy recruiters, see Uriell & Clewis, 2009b, and Appendix B).

## Generational Boundaries

- Generational age\* cutoffs
  - Millennial: 27 years of age or younger
    - » Also called Generation Next, Generation Y
  - Generation X: 28–43 years of age
    - » Also called Generation Jones, Generation “Whatever”
  - Baby Boomers: 44+ years of age

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\*Self-reported age was used to partition the groups

Civilian research has found generational differences in technology use (e.g., The Pew Research Center, 2007; Lenhart, Madden, & Hitlin, 2005), so the sample for the Telework and Technology Survey was selected by generational age instead of by paygrade group. Generational boundaries were pulled from the Pew Research Center (2007) work; Millennials were those who reported their age as 27 years or younger (born after 1980), Generation X was those who reported ages between 28 and 43 (born between 1966 and 1980), and Baby Boomers were those who reported ages greater than 44 (born between 1946 and 1965). Although Baby Boomers have an upper age limit in the research, there are few in the Navy who are Seniors (older than 62; born before 1946), so they are grouped with the Baby Boomers within these results.

## Generational Counts



		Enlisted			Officers			
		Mill.	Gen X	Boomers	Mill.	Gen X	Boomers	
E-2 to								
E-3		48,038	3,575	1	WO	--	666	685
E-4		40,486	7,506	2	ENS	1,742	572	1
E-5		30,861	32,711	406	LTJG	3,308	1,935	9
E-6		3,596	42,691	1,388	LT	800	14,511	591
E-7		12	20,092	1,810	LCDR	--	9,079	1,553
E-8		--	4,636	1,512	CDR	--	4,391	2,713
E-9		--	878	1,733	CAPT	--	82	3,191
		122,993	112,089	6,852		5,850	31,236	8,743
		<b>51%</b>	<b>46%</b>	<b>3%</b>		<b>13%</b>	<b>68%</b>	<b>19%</b>

Note: Surveyable population, from Active Duty Master Records of January 2009

The counts for the active component population that can be surveyed (i.e., not Flag officers or E-1s who are likely still in Boot Camp, not hospitalized or incarcerated), are shown here, based upon data in the Enlisted and Officer Master files of January 2009. The table on the left shows the results for enlisted based upon their dates of birth; counts show that over half of the enlisted population are Millennials. Officers (table on the right) are most likely to be Generation X, with only 13 percent being Millennials. Combining the enlisted and officer populations, half of the Navy is Generation X, 45 percent are Millennials, and 5 percent are Baby Boomers.

## Method and Response Rates

- Random sample stratified by generational age groups (Millennials, Generation X, and Baby Boomer)
- Notification letter, including web address of survey and user ID, sent in October 2008; 3 reminder letters sent before field closed in January 2009
- Responses statistically weighted to be representative of the Navy

	Millennial (27 & under)	Generation X (28 to 43)	Baby Boomer (44 & above)	Overall
Sent	6,446	4,819	2,959	14,224
Accessed	1,013	1,151	1,073	3,280
Useable	931	1,113	1,054	3,098
Return-to-Sender	837	787	605	2,229
Weighted Response Rate	21%	32%	44%	27%
Maximum Margin of Error for Primary Questions	± 4.1%	± 3.5%	± 3.5%	± 2.5%

Note: Response rates similar to typical Navy-wide web-based survey response rates.

The Navy Telework and Technology Survey (questions provided in Appendix C) was a web-based survey, and questions were presented to respondents in small numbers per page (for example 1–3 questions per page) to minimize respondent scrolling. Even though the survey was web-based, paper notification letters were needed to inform participants of their selection. The initial letter (see Appendix D for a copy of all letters) was sent through the United States Postal Service in October 2008, with reminder letters being sent through early January to those who had not yet replied. All letters contained the web address of the survey as well as the respondent's unique user ID, which was used to provide the respondent the capability of saving and returning to the survey at any point, but could only be used for one complete submission.

A random sample of active component personnel was selected and stratified by age groups. The Defense Manpower Data Center (DMDC) Sample Planning Tool (Kavee & Mason, 2001) provided an optimum overall sample size of 14,224, including 6,446 for Millennials, 4,819 for Generation X, and 2,959 for Baby Boomers.

From the total invited to participate in the study, 3,280 accessed the survey and 3,098 provided useable information by completing over 50 percent of the overall questions as well as their age (needed to statistically weight the results to the Navy-wide population). Response rates by age group are similar to those found in other Navy-wide surveys; the younger and junior personnel are less likely to respond (21% for this survey) than those who are older and senior (44% for Baby Boomers).

Responses were weighted in reflection of the Navy population at the time of the survey. Data were analyzed using SPSS 16.

## Analysis Key

- Analyses are presented for each age group as well as across age groups (overall)
  - Additional subgroup comparisons annotated throughout
- Comparisons are made between age groups, and those with non-overlapping margins of error are highlighted as "significant"
  - "a" indicates difference between Millennial and Generation X (Gen X)
  - "b" indicates difference between Gen X and Baby Boomer (Boomer)
  - "c" indicates difference between Millennial and Boomer



Results are presented in the slides by age group as well as overall. Between subgroup comparisons were conducted, and significance was based upon non-overlapping margins of error for each question. The results of the comparisons are provided as letters beside the overall results. An "a" indicates that there was a difference between the Millennial and the Generation X groups, a "b" indicates a difference between Generation X and Baby Boomers, and a "c" indicates a difference between Millennials and Baby Boomers.

Results were also computed by gender and enlisted/officer status. If significant differences were found for these groups, the verbiage below the slide will indicate percentages for the groups of interest.

# Demographics

There are some key demographic differences between the three generations, as illustrated below. Those older, perhaps because of paygrade, are more likely to be assigned to shore duty than the Millennials. Boomers are also more likely to have attended at least some college and have a family.

	% Responding "Yes"			
	Millennial	Gen X	Boomer	Overall
On shore duty (Type 1, 3, or 6)	50	60	72	57 <sup>a, b, c</sup>
Deployed	10	9	7	9
Male	83	88	88	85
Attended some college	64	87	93	77 <sup>a, b, c</sup>
Have family (spouse and/or children)	50	84	90	69 <sup>a, b, c</sup>
Have 5 years or more of Internet use	94	98	99	96 <sup>a, c</sup>

Questions 4, 5, 7, 10, 11, 12, and 13

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There were key demographic differences between the three generations, as displayed in the above table. Not surprisingly, older respondents were more likely to be assigned to a shore billet, have attended college, and have a family than Millennials. Both Generation X and Baby Boomers were more likely than Millennials to have five or more years of Internet use, although for all three groups the percentage is 94 percent or higher.

Results were examined for enlisted and officers as well as for men and women, and significant differences noted. Among those findings:

- Officers were more likely than enlisted, and women were more likely than men, to be on shore duty (73% of officers vs. 53% of enlisted; 70% of women vs. 54% of men).
- Officers were more likely to have attended some college than enlisted (99% vs. 73%).
- Officers (77%) and men (70%) were slightly more likely to have family than enlisted (68%) and women (64%).
- Officers (100%) were more likely to have five years or more of Internet experience than enlisted (96%).

**Survey Highlights**

- Nearly ¼ have teleworked at least one day at previous shore command
  - Almost ¾ are interested in teleworking; ½ say ability to telework would motivate them to stay Navy
  - 60% of Gen X and Boomers are likely to have done something for their Navy job on non-work computer in last 30 days
- 90% of Millennials have visited social networking site in last 30 days
  - 88% of Millennials, but just 30% of Boomers have their own social networking page
- Just over ½ are satisfied with their Navy work computers and primary computer networks
- Over 40% of respondents agreed to take concurrent Lightning Poll (survey via text message)
  - Nearly all who took Lightning Poll thought it was easy to do
- Over ¾ believe technology has improved ability to do their Navy jobs
- Millennials and Boomers most dissimilar in uses of technology; Gen X sometimes similar to Millennials, sometimes similar to Boomers

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While the data are summarized on pages 48-51, six points were extracted as highlights of the entire survey. The first was that almost a fourth of Navy personnel have teleworked at least one day while at their current or (if on sea duty) previous shore command. A majority are interested in teleworking, and half indicate that teleworking would motivate them to stay in the Navy. Sixty percent of those in Generation X and Baby Boomers have worked from home in the past 30 days by doing something for their Navy job on a non-work computer.

Social networking websites have been scrutinized recently by the Department of Defense (Carey, 2009; Schachtman, 2009; Weaver, 2009). Questions were included on this survey about use of social networking websites. Most Millennials have visited a social networking site in the last 30 days and have created their own social networking pages, while only 30 percent of Baby Boomers had their own page.

For comparison regarding use of computers at home, respondents were asked about satisfaction with their work computers and networks. Just over half of respondents indicated they were satisfied with both.

The Telework and Technology Survey was also used as a preliminary step for a Lightning Poll, or survey by text message (see Appendix E for Lightning Poll questions). Over 40 percent agreed to participate and provided their cell phone numbers. While not everyone completed all five questions of the Lightning Poll, almost all of those who did felt it was easy to do.

Several questions asked about the impact of technology on things such as pursuing hobbies, ability to keep in touch with family and friends, and ability to do their Navy job. Over 75 percent believe that technology has improved the ability for them to do their Navy jobs.

Millennials and Baby Boomers are the most dissimilar groups in their uses and attitudes towards technology. There was no clear pattern for Generation X; for some questions they were similar to Millennials while on others they were similar to Baby Boomers.



The first section of the survey dealt with Sailors' attitudes toward telework. Participants were given a definition of telework to ensure that everyone had the same concept in mind when answering the succeeding questions:

*“Telework (also known as flex hours, telecommuting, and work-at-home) is defined by the federal government as “the ability to do your work at a location other than your ‘official duty station.’” This generally involves using computers and high-speed networks to allow employees to work from almost anywhere.”*

Because of the unique nature of being deployed aboard ship, the telework questions were explicitly limited to telework at shore commands. If the respondent was not presently at a shore-based command, they were asked to think about their last shore-based command.

# Telework

Telework was defined on the survey as "the ability to do your work at a location other than your 'official duty station.'" Younger Sailors are less likely than both Gen X and Boomers to have teleworked or know someone who has teleworked. About 2/3 of all three age groups are interested in teleworking, but both of the older generations are more likely than Millennials to believe it is possible to telework in their current jobs.

% "Yes"				
	Millennial	Gen X	Boomer	Overall
Have you teleworked at least one day (at previous shore command) *	18	25	26	23 <sup>a, c</sup>
Do you know someone at your command (previous shore command) who has teleworked *	25	35	40	32 <sup>a, c</sup>
Interested in teleworking	68	74	69	71
Do you believe teleworking is possible in your current (last shore-based) job *	45	62	64	56 <sup>a, c</sup>

Questions 14/17, 15/18, 16/19, and 21/2, reflecting teleworking at current or previous (if on sea duty) shore command.  
\*Those who have not yet been on shore duty not included.

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More than two-thirds of all three age groups indicated their interest in teleworking, although the likelihood of having teleworked at least one day, knowing someone who had teleworked, or think that teleworking is possible in their current shore-based job showed differences across age groups, with the Millennials having lower results than either of the other two groups. While only about a quarter of the Navy has teleworked and 32 percent know someone at their command who has teleworked, over half believe that teleworking is possible in their current (or last) shore-based job.

In comparing subgroups, officers (39%) and women (37%) were more likely than enlisted (30%) and men (31%), respectively, to know someone who had teleworked at their command. In addition, officers (69%) were more likely to believe that teleworking is possible in their current job than enlisted (53%).

## Telework Impact on Retention

About half of Sailors (48% of Millennials, but 37% of Boomers) indicate that the ability to telework would motivate them to remain in the Navy. Only 3% indicate that it would motivate them to leave the Navy.

How would the ability to telework impact your desire to stay in the Navy?				
	Millennial	Gen X	Boomer	Overall
It would motivate me to remain in the Navy	48	44	37	45 <sup>b, c</sup>
It would have no impact on my motivation to remain in the Navy	50	53	59	52
It would motivate me to leave the Navy	3	3	4	3
Question 20				

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Because efforts to integrate life and work, such as telework, are seen as essential in retaining Sailors (CNO, 2007), a question was added to the survey to ask about the perceived impact of telework on remaining in the Navy. Overall, 45 percent of Sailors indicate it would motivate them to stay in the Navy, with significantly more Millennials (48%) and Generation X (44%) indicating this than Baby Boomers (37%). Slightly higher percentages indicated it would have no impact on their decision (ranging from 50% of Millennials to 59% of Baby Boomers), with only 3 percent stating that telework would motivate them to leave the Navy.



The second section of the survey dealt with ownership of various technologies that might be useful for teleworking, such as cell phones and computers (desktop as well as laptop). In addition, use of these technologies was queried, to serve as a starting point for investing training dollars to enable telework.

## Personally Owned Technology

Most people (99% overall) have access to a computer away from work, with 84% owning a laptop computer. Of those who own a laptop, 65% overall (more Millennials than Boomers) take their laptop on deployment, with the majority who did not take it indicating that they did not want to. Additionally, 98% of Sailors own a cell phone.

% "Yes"				
	Millennial	Gen X	Boomer	Overall
Desktop computer	51	82	89	69 <sup>a, b, c</sup>
Laptop computer	83	84	82	84
Personal Digital Assistant (PDA)	28	33	34	31
Cell phone	99	97	94	98 <sup>b, c</sup>
MP3 Player	88	84	73	85 <sup>b, c</sup>
Digital Camera	88	95	94	92 <sup>a, c</sup>
Camcorder	39	65	67	54 <sup>a, c</sup>
Webcam	61	63	51	61 <sup>b, c</sup>
E-book reader	8	9	9	9

Question 23

NPRST



All respondents were asked about ownership of various types of technology. Results indicate that most have access to a computer away from their workplace, and across age groups it tended to be a laptop that they owned, with Millennials much more likely than the other groups to own a laptop than a desktop. Almost two-thirds overall of those who own a laptop are likely to take it with them on deployments. Comparable civilian results show that 61 percent of networked workers (those who use internet or e-mail at work) and 39 percent of all adults have laptop computers (Madden & Jones, 2008).

In addition, most Sailors (98%) own a cell phone, similar to 93 percent of civilian networked workers (Madden & Jones, 2008), and about one-third own a personal digital assistant that is not part of their cell phone, also similar to results for networked civilians (27%; Madden & Jones, 2008).

## Use of Computers Outside Work

About half or more (61% overall) used computers several times a day in the last 30 days, with about another quarter (23% overall) using it once a day. Most (71% overall) are on PC computers with Windows XP (52% overall) or Vista (38% overall). Almost all Sailors (95% overall) access the internet on their computers. Millennials are more likely than those older to have played games or watched DVDs on their computers in the last 30 days while both Gen X and Boomers are more likely to do work for their Navy job or use spreadsheets than those younger.

Top 5 uses of non-work computer in the last 30 days

Millennial	Gen X	Boomer	Overall
Internet for any purpose (95%)	Internet for any purpose (95%)	Internet for any purpose (96%)	Internet for any purpose (95%)
Photos/Graphics (69%)	Photos/Graphics (72%)	Word processing (81%)	Photos/Graphics (70%)
Word processing (61%)	Word processing (72%)	Photos/Graphics (68%)	Word processing (68%) <sup>a, b, c</sup>
Played games (59%)	Something for Navy job (58%)	Something for Navy job (61%)	Played games (51%) <sup>a, b, c</sup>
Watched DVD (56%)	Spreadsheets (53%)	Spreadsheets (53%)	Something for Navy job (50%) <sup>a, c</sup>

Question 37

NPRST



Respondents were asked about the uses of their home computer in the previous 30 days (or the last 30 days when they were home before their current deployment). Almost two-thirds used their non-work computers several times a day, with another quarter using it once a day. Most indicated they use PC computers with Windows XP or Windows Vista.

Officers (80%) and men (74%) were more likely to own a PC than enlisted (69%) and women (53%), respectively. In addition, enlisted personnel were more likely to use Vista (40%) than officers (24%).

When asked what activities respondents do on their computers, 95 percent of Sailors indicated they access the internet on their computers, which was clearly the predominant use of the computer as indicated in the table above. Younger Sailors are more likely to play games or watch DVDs than the two older groups, while about 60 percent of older Sailors are likely to do something for their Navy jobs (50% overall), a finding similar to civilian networked workers (56% do some work at home, with 20% doing it every day or almost every day; Madden & Jones, 2008).

Enlisted personnel (who are more likely to be Millennials than officers) were more likely than officers to play games on their computers (54% compared to 36%), while officers were more likely to access the internet (99% compared to 94%), do word processing (87% compared to 64%), work with photos (81% compared to 68%), work with spreadsheets (66% compared to 39%), or do something related to their jobs (60% compared to 48%). Men were more likely to use word processing (69% compared to 62%) or use spreadsheets (44% compared to 38%) than women.

## Non-work Internet Access

Almost 2/3 (60% overall) used the internet from home several times a day during the last 30 days, while another ¼ (24% overall) used it about once a day. The majority of Sailors use high-speed connections (93% overall) and wireless access (73% overall) when accessing the Internet away from work.

### Internet Connectivity (% "Yes")

	Millennial	Gen X	Boomer	Overall
Dial-up connection	3	4	5	3
High-speed connection	90	94	94	93 <sup>a, c</sup>
No	7	2	1	4 <sup>a, c</sup>

Questions 25 and 28 combined

Note: For those who have computer access, either through their own personal computer/laptop or through roommate, friend, library, etc.

### Web Browser Most Regularly Used in Last 30 Days (% "Yes")

	Millennial	Gen X	Boomer	Overall
Internet Explorer	65	78	78	73 <sup>a, c</sup>
Firefox	27	13	11	19 <sup>a, c</sup>
Safari	4	7	6	5
Other/Unknown	4	3	6	3

Question 39

Note: Only includes those who accessed the internet from home in the past 30 days.

NPRST

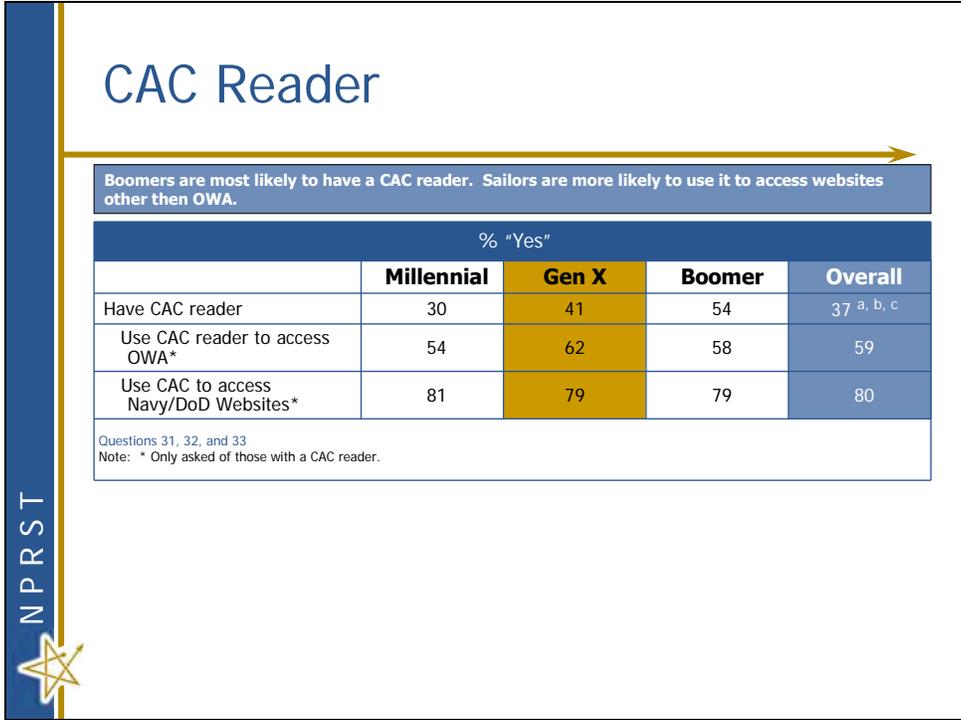


Respondents were asked how often they access the internet. Almost two-thirds used it several times a day during the past 30 days, with about another quarter using it about once a day; officers are significantly more likely than enlisted to access the internet about once a day (31% vs. 22%). Sailors are connected to the internet more often than civilian networked workers, 14 percent of whom are constantly connected, 26 percent use it several times a day, and 22 percent use it once a day (Madden & Jones, 2008).

The majority use high-speed connections that often are also wireless connections. Officers (98%) and men (93%) are more likely than enlisted (92%) and women (88%) to have high-speed connections while enlisted (5%) and women (7%) are more likely than officers (1%) and men (4%) to not have internet access. Officers are more likely than enlisted to have wireless access (80% compared to 71%).

Compared to all civilian adults, Navy personnel are more likely to have broadband/high-speed connections at home (93% for Navy compared to 55% for all civilians), although this difference in access is lessened if just looking at the civilian age ranges that are comparable to the predominant Navy age ranges (70% of 18–29 year old civilians and 69% of 30–49 year old civilians) (Horrigan, 2008).

The most common regularly used browser is Internet Explorer, although almost one-third of Millennials use Firefox. Although a small percentage of overall browser use, officers are more likely than enlisted to use Safari (13% compared to 4%).



In 1999, the Deputy Secretary of Defense (1999) announced the implementation of the new identification card that would be used for building access as well as to log into computers and encrypt, encode, or electronically “sign” documents in *8c8-bhcx WgU BYk 8 7UFX H Y7ca a cb 5Wgg 7UFX*. This smart card or common access card (CAC) has a magnetic stripe as well as an integrated circuit chip, and over time, the integrated circuit chip has become a requirement to log into many government computers, including those on the Navy Marine Corps Intranet (NMCI). In addition, a CAC and the associated reader or a similar technology is the “primary method for remote client-side authentication” (pg. 9, SECNAV, 2009).

The survey included three questions about CACs. The first asked if respondents had a CAC reader, and over half of Boomers indicated they did, compared to just 30 percent of Millennials. About 60 percent of all groups use their CAC reader to access Outlook Web Access (OWA), fewer than the 80 percent who use their CAC reader to access Navy/DoD websites.

## Social Networking

Most (99% overall) have used email from any location in the last 30 days. Most only use a web-based email account at home (67% overall, 80% of Millennials). Millennials are most likely to have visited a social networking site in the last 30 days or have ever created their own page (89% and 88%, respectively, compared to 44% and 30%, respectively, of Boomers). Of those who have a social networking page, about 2/3 (61% overall) indicate that it is visible to the general public.

% "Yes"				
	Millennial	Gen X	Boomer	Overall
E-mail in the last 30 days	99	99	99	99
Ever subscribed to electronic mailing list**	45	51	47	48
Visit Facebook, MySpace, etc. in the last 30 days*	89	69	44	76 <sup>a, b, c</sup>
Ever created Facebook, MySpace, etc. page	88	61	30	71 <sup>a, b, c</sup>
Ever had blog	13	6	4	9 <sup>a, c</sup>
Read blog in last 30 days **	40	36	33	38
Ever contributed to Wiki	10	7	7	8
Chat in last 30 days	53	38	24	44 <sup>a, b, c</sup>

Questions 41, 45, 48, 46, 50, 51, 52, 53, and 54

Note: \* Answer choices collapsed to show percent who accessed social networking sites at all within the last 30 days.

\*\* Don't know not included.

NPRST



The Telerwork and Technology Survey included many questions to capture the use of electronic networks by respondents for social purposes, including the primarily text-based e-mail, social networking sites (Facebook, MySpace, etc.), and blogs. Some Navy commands have their own social networking sites (see the Navy Social Media Directory at <http://www.navy.mil/media/smd.asp> for a list), but these avenues for social media have recently been of noticeable interest to DoD because of concerns about cybersecurity (Dao, 2009). In light of the growing number of users, their frequency of use (Sutter, 2009), and the variety of things shared at sometimes inappropriate times (Gross, 2009), the survey tried to capture a Navy-wide baseline for these behaviors.

As seen in the table, e-mail is clearly the most common social media, across all groups. For Millennials, visiting a social networking site is almost as common, but this is not true for Generation X and even less so for Boomers. About half of the Millennials have "chat"-ed (instant messaging) in the last 30 days, again higher than Generation X and Boomers.

Some differences appear when looking at results for subgroups, especially for officer and enlisted comparisons. Enlisted (68%) and women (72%) are more likely than officers (60%) and men (66%), respectively, to only use web-based e-mail. Officers are more likely than enlisted to have used e-mail in the last 30 days (100% vs. 99%), subscribed to e-mail lists (62% vs. 45%), and read a blog in the last 30 days (46% vs. 36%), while enlisted are more likely than officers to have visited a social networking site (80% vs. 57%), have created a page on a social networking site (75% vs. 49%), had a blog (10% vs. 5%), and to have chatted in the last 30 days (45% vs. 35%). Enlisted (64%) and men (63%) are more likely than officers (39%) and women (45%), respectively, to have a visible social networking page. Women (77%) are more likely than men (70%) to have created a page on a social networking site and to have ever had a blog (13% compared to 8%).

Overall, results are comparable to civilian results: 35 percent of civilians (ranging from 75 percent of 18–24 year olds to 10 percent of 55–64 year olds) have a social networking website profile and over half access social networking websites daily (37%) or every few days (23%) (Lenhart, 2009). Thirty-two percent of Networked civilians (those who use internet or e-mail at the workplace) read blogs at home, 11 percent have their own blog, and 34 percent chat (Madden & Jones, 2008).

Since the survey was administered, the Department of Defense has released a memo indicating that access to all social networking sites will generally be allowed from DoD computers (Deputy Secretary of Defense, 2010).

## Uses of Social Networking

Sailors indicate that the most common use of social networking sites are to stay in touch with friends they rarely see (ranging from 64% of Boomers to 93% of Millennials). Millennials are most likely to also use it to stay in touch with friends they see a lot (60%, compared to 20% of Boomers).

% "Yes"				
	Millennial	Gen X	Boomer	Overall
Make new friends	37	24	12	30 <sup>a, b, c</sup>
Stay in touch with friends you see a lot	60	36	20	48 <sup>a, b, c</sup>
Stay in touch with friends you rarely see	93	85	64	88 <sup>a, b, c</sup>
Make plans with friends	40	21	12	30 <sup>a, b, c</sup>
Stay in touch with professional contacts	27	44	42	35 <sup>a, c</sup>
Stay in touch for education purposes	26	27	29	26

Question 49

Note: Includes those who have used social networking site in last 30 days

NPRST



Respondents who at least occasionally use social networking sites were asked why they used them. The majority of all three age groups indicate that they use them to stay in touch with friends they rarely see. A large portion of Millennials also use social networking sites to stay in touch with friends they see a lot, while over 4 in 10 of Generation X and Boomers use them to stay in touch with professional contacts.

Differences again appeared by other subgroups. Enlisted were more likely than officers to use social networking to make new friends (32% vs. 14%), stay in touch with friends seen a lot (50% vs. 32%), stay in touch with rarely-seen friends (90% vs. 76%), and make plans (32% vs. 20%). Men were more likely than women to use social networking to make new friends (31% vs. 22%) and stay in touch with professional contacts (36% vs. 29%), while women more likely than men to use it to stay in touch with rarely-seen friends (93% vs. 87%) and for educational purposes (32% vs. 25%).

Civilians are almost as likely as Sailors to use social networking sites to stay in touch with friends (89%), but are more likely than Sailors to use these sites to make plans (57%) and make new friends (49%) (Lenhart, 2009).

# Audio Networking

About ¼ of Sailors have talked to someone else through the Internet (through Skype, etc). About 10% indicate they have ever listened to CNO's podcast.

% "Yes"				
	Millennial	Gen X	Boomer	Overall
Talked through the Internet (VoIP)	27	25	21	26
Listen to podcast	16	20	20	18
Ever listened to CNO's podcast	7	11	13	9
Have own podcast	1	1	1	1

Questions 55, 58, 59, and 60

NPRST



The survey also asked about audio networking. About one-fourth of Sailors have used VoIP. Podcasts are slightly less common, with about 1 in 5 Sailors having listened to a podcast in the past 30 days; officers (28%) and men (19%) are more likely than enlisted (17%) and women (14%), respectively, to listen to podcasts.

Although there are a number of military- and Navy-specific podcasts currently being produced, the survey only asked if respondents had ever listened to the CNO's podcast (available from his website at <http://www.navy.mil/cno/index.asp>); only about 1 in 10 had listened.

## Video Networking

Photos are often shared and viewed by Sailors through e-mail and the Internet (87% and 83%, respectively). Almost ¼ of Millennials (53% of Boomers) watch videos online.

% "Yes"				
	Millennial	Gen X	Boomer	Overall
Ever share digital photos through e-mail	87	87	81	87 <sup>b, c</sup>
Ever post digital photos to Internet	63	41	22	50 <sup>a, b, c</sup>
Ever view digital photos on Internet	88	79	72	83 <sup>a, b, c</sup>
Posted live images (streaming video) in the last 30 days	13	7	5	10 <sup>a, c</sup>
Ever share video through e-mail	21	25	13	22 <sup>b, c</sup>
Ever post videos online	19	12	3	14 <sup>a, b, c</sup>
Ever watch videos online	72	65	53	68 <sup>a, b, c</sup>

Questions 56, 62, 64, 66

NPRST



Respondents were also asked about video networking, including sharing photos as well as live and recorded video through e-mail and the internet. Most respondents have shared photos through e-mail and viewed photos online. Millennials are more likely than Generation X and Boomers to have posted digital photos online for others to see (e.g., through Flickr or Shutterfly). Enlisted (52%) were more likely than officers (40%) and women (58%) were more likely than men (48%) to post photos to the internet; officers (93%) were more likely than enlisted (85%) to share photos through e-mail.

Millennials were more likely than Generation X and Boomers to have posted streaming video in the last 30 days, although the percentages are still relatively low. The most common video sharing for all three age groups is to watch videos online, although there are differences between the three age groups with almost 3 of 4 Millennials watching videos online. Enlisted (16%) are more likely than officers (8%) to post their videos, and men (69%) are more likely than women (59%) to watch videos online.

## Other Online Activities

Most have bought something online or used online banking. Most (96% overall) have taken or expect to take online education courses.

	% "Yes"			
	Millennial	Gen X	Boomer	Overall
Access virtual world (e.g., Second Life) in the last 30 days	2	1	1	1
Ever bought online	95	97	95	96
Ever sold online	29	40	25	34 <sup>a, b</sup>
Ever used online banking	93	95	90	94
Ever taken online educational courses	63	78	76	71 <sup>a, c</sup>
If no online educational courses, plan to take any in future	56	55	38	55 <sup>b, c</sup>

Questions 67, 68, 69, 70, and 71

NPRST



To gather a complete picture of technology comfort, respondents were also asked about other online activities, including participation in virtual worlds (e.g., Second Life), buying and selling online, online banking, and online courses. As seen in the table above, almost all respondents have bought something online or used online banking. Officers are more likely than enlisted to have bought online (100% vs. 95%), sold online (43% vs. 32%), and used online banking (97% vs. 93%), and men are more likely than women to have sold something online (36% vs. 23%). In comparison, 72 percent of networked civilian workers have made online purchases at home (Madden & Jones, 2008).

Almost three-fourths of the Navy has ever taken an online course, with those older (Generation X and Boomers) more likely than Millennials to have done so. Those who had never taken an online course were asked if they plan to in the future, with over half of Millennials and Generation X indicating that they would but slightly fewer of the Boomers. Enlisted (59%) who have never taken online courses are more likely than officers (30%) to expect to take a course in the future.

Few have accessed a virtual world in the last 30 days.

## Online Activities of those 18-20

Those 20 years old or younger were asked about activities during their senior year of high school, since they may not have yet established their own households. E-mailing and accessing social networks has increased for this population, but reading blogs, writing blogs, chat, and accessing virtual worlds have decreased.

	% "Yes"	
	During Senior Year of High School	In last 30 days
Send e-mail	90	97
Access social networking	82	88
Read blog	63	35
Write blog	37	18
Chat/IM	72	52
VoIP	27	24
Access virtual world	12	3

Questions 72, 41, 48, 51, 50, 53, 55, and 56

NPRST



Some questions have been raised about the comparison of Navy life to pre-Navy life, in terms of technology. Those 18-20 were asked about activities during their senior year of high school, and results are compared above to the last 30 days (i.e., while in the Navy). As can be seen, many of the percentages are comparable between high school and Navy life. The largest differences are for reading blogs, “chat”/IM, and writing blogs.

Differences also appear for genders, although the differences are only for the last 30 days and not while in high school; women 18–20 years old are more likely than men to have sent e-mail in the last 30 days (100% vs. 96%) while men are more likely than women to have accessed a virtual world (4% vs. 0%).



Although the survey is about telework and the technologies that can be used outside of the work environment to enable telework, a few questions were added to the survey to also assess satisfaction with technologies at work.

## Work Computer Satisfaction

Most Sailors (79% overall) access a computer several times a day (only 64% of Millennials) for their Navy job. Half overall have access to own workstation (32% of Millennials, 62% of Gen X, and 88% of Boomers). About half are satisfied with the work computer itself (higher for Boomers). About ¾ overall have all software they need to do their job, although only 58% indicate they are satisfied with the software they usually use. The majority are primarily on the NMCI network (54% overall), although about 1/3 of Millennials indicated they did not know their network. About half are satisfied with their primary network (higher for Boomers).

% Responding "Very Satisfied" / "Satisfied"				
	Millennial	Gen X	Boomer	Overall
Satisfied with work computer (i.e., speed, monitor size, etc.)	47	59	68	54 <sup>a, b, c</sup>
Satisfied with software usually used	53	62	71	58 <sup>a, b, c</sup>
Satisfied with primary network	49	55	60	53 <sup>c</sup>

Questions 75, 76, and 79

NPRST



Most Sailors use computers at work several times a day, although use increases with age. Likely associated with that is access to a computer; 88 percent of Boomers have access to their own computer as compared to 62 percent of Gen X and 32 percent of Millennials. About half are satisfied with their work computers, with the software that they usually use, and the network they are on (predominantly the NMCI network); all three findings show more satisfaction for Boomers than the other generations.

Gender differences were found as well. Women were more likely than men to access a computer several times a day and have access to their own workstation, have all the software they need to do their job, and be satisfied with the computer and the software they usually use.

Not surprisingly, officers were more likely than enlisted to have their own workstation while also being more satisfied with their computer and the software they usually use.

About half indicated they are on the NMCI network (31% of Millennials indicated they do not know their network, as compared to 13% of GenX and 11% of Boomers). Findings shown in the table below indicate that the most satisfying network for most groups is the legacy network, although few indicate that they are on a legacy network. Contrary to other findings (EDS NMCI Communications, 2008), just above half of those on the NMCI network indicate that they are satisfied with it.

**Satisfaction with network (percentage)**

		<b>Overall</b>	<b>Millennial</b>	<b>Gen X</b>	<b>Boomer</b>	<b>Enlisted</b>	<b>Officer</b>	<b>Men</b>	<b>Women</b>
<b>Use</b>	<b>NMCI</b>	54	47	60	52	54	52	54	51
	<b>Legacy</b>	2	2	2	3	2	4	2	2
	<b>Other</b>	4	3	5	11	3	9	4	4
<b>Service's Network</b>									
<b>Satisfaction</b>	<b>NMCI</b>	55	53	55	60	55	50	54	57
	<b>Legacy</b>	74	71	80	52	66	90	78	56
	<b>Other</b>	68	64	67	77	64	75	66	75
<b>Service's Network</b>									

# Internet Access at Work

About half of Sailors (54% overall) use the internet several times a day while an additional 21% use it once a day. Boomers are most likely to have access from their own computer and have a constant connection, while Millennials are most likely to access the internet through a shared workstation. Overall, 59% are satisfied with current internet access at work. Over 3/4 (84% overall, up to 93% for Boomers) use unclassified e-mail at work, with most (68% overall, ranging from 50% of Millennials to 89% of Boomers) using it several times a day.

"Do you personally have access to the Internet (through NIPRNET) at your Navy job?"



■ Yes - at own computer (a, b, c)  
■ Yes - at shared computer workstation (a, b, c)  
■ No  
■ Don't know

Questions 80 and 81

Note: \* Excludes those who do not have Internet access at their Navy job

How accessible is the WWW?\*

	Millennial	Gen X	Boomer	Overall
Constant – WWW is always or nearly always available to me	61	70	75	67 <sup>a, c</sup>
Intermittent – WWW is sometime available, but not always "up"	34	27	23	30 <sup>a, c</sup>
Rarely – WWW is almost never or rarely available to use	5	3	2	4

While Sailors may have access to a computer, that computer may not be able to access the internet, so respondents were asked specifically about their internet access. About half of all Sailors indicated they use the internet several times a day, with another 21 percent using it once a day. This is similar to findings for networked civilian workers; about 27 percent are constantly on the internet, 22 percent access it several times a day for internet/e-mail, and 11 percent use it once a day (Madden & Jones, 2008).

As with computers, Boomers are more likely than both Millennials and Gen X to indicate that they have access to internet at their own workstation. Between 10 and 20 percent of all groups indicate that they do not have internet access or do not know if they have access.

Those who have internet access were asked how accessible the World Wide Web is, a concern anecdotally heard from those assigned to ships who have to access through satellites while at sea. Overall, about two-thirds indicate that they have constant WWW access, with most of the remainder indicating that access is intermittent; few indicate that WWW access is rare. Findings are comparable to the 2005 Navy-wide Personnel Survey (Whittam, 2007).

Women are more likely than men to access the internet several times a day, to be satisfied with their current access, and to have internet at their own computer; men are more likely than women to have internet access at a shared computer. Officers are more likely than enlisted to access the internet several times a day, be satisfied with their current internet access, use unclassified e-mail several times a day, have internet at their own computer, and have constant access to WWW; enlisted are more likely than officers to only use the internet once a day and to have intermittent internet access at a shared computer.

## Navy Internet Initiatives

Almost 2/3 of all groups believe that web-based self-service initiatives are moving the Navy in the right direction, but less than 1/3 believe these initiatives are useable while underway. Most (75% overall) access career information while at work (ranging from 69% of Millennials to 86% of Boomers).

% Responding "Strongly Agree"/"Agree"				
	Millennial	Gen X	Boomer	Overall
Web-based self-service initiatives are moving the Navy in the right direction	62	64	66	63
Web-based self-service initiatives are useable while underway	34	24	28	29 <sup>a</sup>
The Navy provides enough information on the web for me to make informed career decisions	48	60	61	54 <sup>a, c</sup>

Questions 88, 89, and 90

NPRST



For the past several years, the Navy has been moving functions to being internet-based (see, for example, Suich [2005] and Navy Personnel Command Public Affairs [2010]). Respondents were asked their opinions of these web-based self-service initiatives. About two-thirds of all three age groups feel that these initiatives are moving the Navy in the right direction, with results for both enlisted (65%) and officers (55%) being slightly higher than found on the Navy-wide Personnel Survey (Whittam, 2007); this is reflected in one comment about the survey received from a Sailor: "...this might just be the start of a future updated Navy without outdated technology." However, only about one-third feel that these web-based systems are useable while underway.

Most respondents indicated that they access career information while at work (ranging from 69% of Millennials to 86% of Boomers); about 6 in 10 of the Gen X and Boomers feel that they are provided enough information on the web for them to make informed career decisions, significantly higher than the 48 percent of Millennials. Again, results (56% agreement for enlisted and 46% for officers) are slightly higher for the question about informed decisions than was found on the Navy-wide Personnel Survey (Whittam, 2007).



As this study was part of a larger study on use of text messaging for data collection, the survey included questions about hand held technologies that might be useable for data collection.

## Personal Digital Assistant (PDA) Capabilities – Overall

Overall, 31% have a personal PDA that is not part of their cell phone. Nine percent of Sailors overall have a work-issued PDA. Personal PDAs have capabilities to play games and music while work PDAs can send/receive e-mail and surf the internet.

	% "Yes"		
	Personal PDA	Work PDA	Desired Work PDA *
Take still pictures	56 <sup>a, b, c</sup>	47 <sup>a, b, c</sup>	---
Play music/MP3	76 <sup>b, c</sup>	62 <sup>b, c</sup>	27 <sup>a, c</sup>
Send and receive text messages	68 <sup>c</sup>	76	63 <sup>** b, c</sup>
Send and receive e-mail	71 <sup>c</sup>	90	80
Take video	42 <sup>c</sup>	36 <sup>a, b, c</sup>	---
Play video***	51 <sup>b, c</sup>	39 <sup>b, c</sup>	28 <sup>a, c</sup>
Play games	80 <sup>c</sup>	68 <sup>b, c</sup>	---
Surf internet	72 <sup>c</sup>	82	72
Run applications	68	66 <sup>b</sup>	65 <sup>b</sup>

Questions 101, 103, and 104  
 Note: \* Desired work PDA features based upon question with multiple selections allowed.  
 \*\* 44% would like MMS  
 \*\*\* "Video download" listed as the desired work PDA feature.

NPRST



About one-third of respondents indicated they own a personal digital assistant (PDA) that was not part of their cell phone. Nine percent have a work-issued PDA. Respondents were asked to indicate what features they have on their PDAs and what features would be desirable in a work PDA. For personal PDAs, playing games, playing music, surfing the internet, and sending/receiving e-mail are the most common capabilities, with over 7 in 10 indicating that these are available on their PDA. Work PDAs are most likely to be used for sending/receiving e-mail and surfing the internet, with 8 in 10 indicating these features being available on their PDAs; almost three-fourths also listed these two features as being desirable in a work PDA.

# Cell Phone Ownership and Text Messaging

Most Sailors have at least a personal cell phone, if not a personal and work cell phone. The majority also have access to text messaging, although this ranges from 85% of Millennials to 72% of Boomers.

% Responding "Yes"				
	Millennial	Gen X	Boomer	Overall
Currently have a work cell phone	12	19	33	17 <sup>a, b, c</sup>
Have text messaging on work cell phone	80	67	59	70
Have personal cell phone	99	97	94	98 <sup>b, c</sup>
Personal cell phone capable of doing text messaging	95	94	89	94 <sup>b, c</sup>
Pay for text messaging	88	83	75	85 <sup>a, b, c</sup>
% Responding "Yes" (composite)				
Have work cell phone with text messaging	9	13	20	12 <sup>b, c</sup>
Have personal cell phone with text messaging	83	76	65	79 <sup>a, b, c</sup>
Have any cell phone with text messaging	85	79	72	81 <sup>b, c</sup>

Questions 105, 106, 23, 108, and 109

NPRST



31

Most Sailors indicated that they have a personal cell phone, with some also having a work cell phone. The majority have access to text messaging, with three-fourths of Boomers to 88 percent of Millennials paying for text messaging on their personal phones. When combining personal and work cell phone results together, 81 percent of the Navy has access to at least one cell phone with paid-for text messaging.

Officers are more likely than enlisted to have a work cell phone (31% vs. 14%), although enlisted personnel are more likely than officers to have text messaging on that work cell phone (90% vs. 82%).

Enlisted are more likely than officers (86% vs. 78%) to pay for text messaging on their personal cell phones.

## Cell Phone Capabilities

Most Sailors have cell phones with text messaging, photo, and game capabilities, although Millennials and Gen X are more likely to have phones with these features than Boomers.

	% Responding "Yes"			
	Millennial	Gen X	Boomer	Overall
Take still pictures	86	84	76	84 <sup>b, c</sup>
Play music/MP3	74	64	43	67 <sup>a, b, c</sup>
Send and receive text messages	95	94	89	94 <sup>b, c</sup>
Send and receive e-mail	68	64	45	65 <sup>b, c</sup>
Take video	70	63	48	65 <sup>b, c</sup>
Play video	47	41	23	43 <sup>b, c</sup>
Play games	84	76	58	78 <sup>a, b, c</sup>
Surf internet	71	65	42	66 <sup>b, c</sup>
Run applications	28	22	14	24 <sup>b, c</sup>

Questions 108

NPRST



Respondents were asked what capabilities their cell phones had. Most have cell phones that can send and receive text messages and take still pictures. However, large differences appear between the age groups for many of the other features. The largest differences across groups are for playing music (31% difference), surfing the internet (29%), playing games (26%), playing videos (24%), sending/receiving e-mail (23%), and taking video (22%), with Millennials more likely to have cell phones with these features than Gen X and Boomers.

Perhaps related to the age findings, enlisted personnel are more likely to have higher-end cell phones, with results significantly higher for them than for officers for all features except for the ability to send/receive text messages.

Considering the increase in the availability and use of smartphones (those that act similar to a computer and link to the internet) since the survey was administered (Sutter, 2009), these percentages are likely higher now than when the survey was administered.

## Cell Phone Capabilities Paid for on Current Plan

In addition to having phones with more features than Boomers, Millennials and Gen X are also more likely to pay for the use of those features. Over half of all Sailors (ranging from 65% of Millennials to 46% of Boomers) have unlimited text messaging.

% "Yes"				
	Millennial	Gen X	Boomer	Overall
Text messaging	88	83	75	85 <sup>a, b, c</sup>
E-mail access	38	36	25	36 <sup>b, c</sup>
Multimedia messaging	49	38	26	42 <sup>a, b, c</sup>
Internet access	47	41	27	43 <sup>b, c</sup>
Audio download	26	20	11	22 <sup>b, c</sup>
Video download	21	17	10	18 <sup>b, c</sup>
Applications	11	7	5	9 <sup>c</sup>

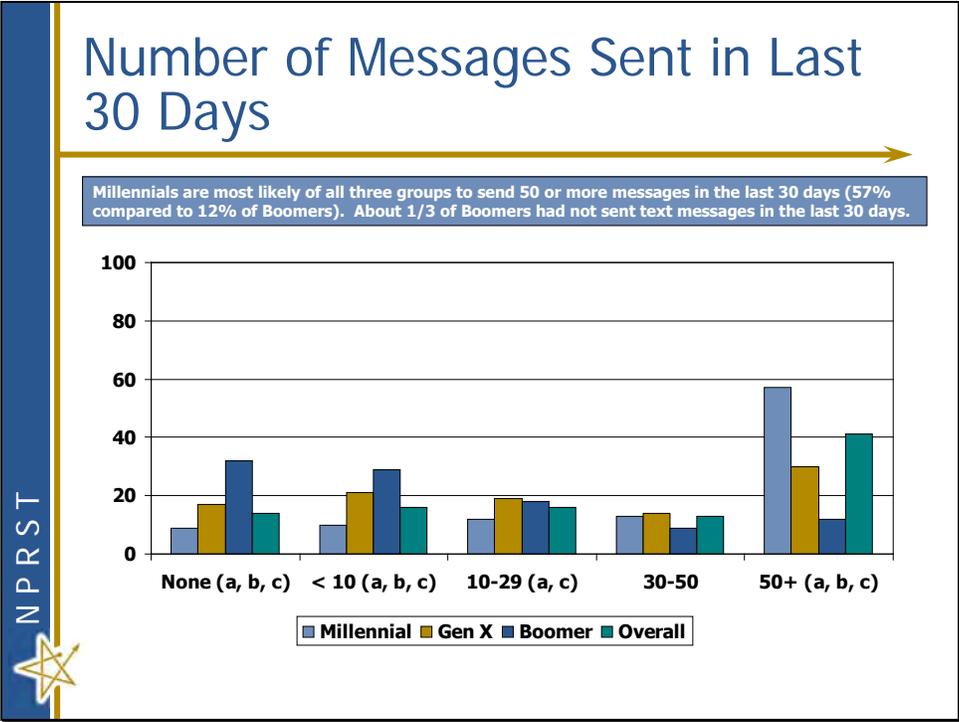
Questions 109

NPRST



While the cell phone may be capable of handling enhanced features, some of these features may require the user to pay, so an additional question was included on the survey to ask what features the Sailor is actually paying to use on their cell phone. The majority pay for text messaging; however, fewer than 50 percent pay for the additional capabilities listed. Enlisted are more likely than officers to pay for all capabilities listed except for applications.

For those who indicated they paid for text messaging, an additional question asked about the number of messages included in their plan. Over half of all Sailors (up to 65% of Millennials) have unlimited text messaging. Women were more likely to have unlimited than men, while men are more likely than women to pay for 100 or less per month.



Those who have text messaging were asked the number of messages they sent in the last 30 days. Millennials are most likely to have sent more than 50 messages in the last month as compared to the other groups. Over half of Boomers send few or no messages.

In line with findings about the number of messages paid for, women are more likely to have sent more than 50 messages, while men are more likely to have sent less than 10 or between 10 and 29.

## Personal Cell Phone Plans

Most Sailors have Verizon/AllTel or AT&T as their personal cell phone providers.

% Using...				
	Millennial	Gen X	Boomer	Overall
AT&T	26	26	25	26
Sprint	15	15	12	15
T-Mobile	18	15	15	16
Verizon/AllTel *	29	35	37	32 <sup>c</sup>
A local provider (e.g., Bell South)	1	1	1	1
Other prepaid or pay as you go options (e.g., TracFone)	3	3	4	3
Other	8	6	7	7

Questions 110  
 Note: \* Verizon purchased AllTel during the course of the survey, so those who answered AllTel are included with Verizon.

NPRST



In the event that the Navy should decide to use cell phones in the future, a question was included on the survey about what providers Sailors used. About one-third use Verizon while another one-fourth use AT&T, with another one-third almost evenly split between Sprint and T-Mobile. Few age group differences were found, with Gen X and Boomers (as well as officers) more likely to use Verizon than Millennials (and enlisted).

# Reasons for Not Owning Personal Cell Phone

About 2% overall (up to 6% of Boomers) do not own a cell phone. The most common reason is because they are not interested in having one.

% Who Selected				
	Millennial	Gen X	Boomer	Overall
Not interested in having one	44	52	50	50
Prefer regular phone	0	32	16	23 <sup>a, c</sup>
Too expensive	24	40	32	35
Too confusing	0	5	2	4 <sup>a, c</sup>
Computer and regular phones can do all I need	20	61	15	44
Concerned about health impact	0	5	5	4 <sup>a, c</sup>
Other	32	15	32	21

Question 107

NPRST



The 2 percent (overall) who do not own personal cell phones were asked why they do not. The most common answer for Millennials and Boomers was that they were not interested in having one; Gen X respondents were significantly more likely than the other two groups to feel that computers and regular phones can do all they need.

## Results of Lightning Poll

Respondents were asked if they would be interested in participating in a Lightning Poll, or survey conducted by text message. Respondents were told that 11 messages would be used for this Lightning Poll, including 5 questions, 5 answers, and a thank you message. Forty-two percent of respondents overall indicated interest in participating in the concurrent Lightning Poll, with a slightly higher percentage of Millennials (45%) than Boomers (36%).

Percentage...				
	Mill.	Gen X	Boomer	Overall
How satisfied are you with your Navy job? (% Satisfied)	64	77	82	71 <sup>c</sup>
Are you satisfied with your command leadership's support of quality of work life programs (e.g., telework)? (% Yes)	26	35	34	31
How would you rate the overall morale of your present command? (% High)	25	31	45	29 <sup>c</sup>
How satisfied are you with the amount of stress in your life? (% Satisfied)	33	40	33	36
Was this survey easy to do? (% Yes)	96	97	98	96

Lightning Poll Questions 1-5

Note: Results weighted to estimated Navy population with text message access.

NPRST



Those who had text messaging were asked if they would be interested in participating in a short (11 message) survey conducted by text message. Forty-two percent overall indicated interest and provided a cell phone number, ranging from 45 percent of Millennials to 36 percent of Boomers.

Results of the five text message questions are presented above. Boomers are most likely to be satisfied with their job and indicate high command morale; high morale was also indicated by officers more than enlisted. Results for these two questions are similar to those found on the 2008 Navy-wide Personnel survey (Whittam, 2009) for officers (73% and 46%, respectively, on the NPS compared to 71% and 45% on this survey) but are only similar for enlisted regarding morale (28% on NPS compared to 25% on this survey; job satisfaction 59% on NPS compared to 71% on this survey).

Boomers and Gen X are more likely than Millennials to be satisfied with command support of telework. Gen X (more so than either of the other two groups) are most likely to indicate they are satisfied with the amount of stress in their life. All three groups found the text message survey to be easy to do.

## Reasons for Not Participating in Lightning Poll

Of the 58% who did not want to participate in the Lightning Poll, over half indicated that they did not want to because their cell phone was for their purposes only. Fifty-two percent of those who did not want to take the text message survey indicated that they would participate if the Navy paid for the text messages or provided a cell phone with text messaging.

% Who Selected...				
	Millennial	Gen X	Boomer	Overall
My cell phone is for my purposes only	61	56	51	58
I don't want to use any of my message allowance	16	14	13	15
I don't want the Navy to have my cell phone number	11	6	3	8 <sup>c</sup>
I don't think that the texts will be limited to 11	6	6	4	6
I think my cell phone number will be saved and used for other purposes	20	13	7	16 <sup>c</sup>
Other	32	34	46	34 <sup>b, c</sup>
Questions 115				

NPRST



Those who did not want to participate in the cell phone survey were asked why they did not. The most common answer (ranging from 61% of Millennials to 51% of Boomers) was because their cell phone is for their purposes only.

The survey also asked if they would have participated if the Navy provided text messaging or a cell phone in order to do the text message survey. Fifty-two percent of those who did not want to take the text message survey indicated that they would have participated if the Navy paid the means to do so. Enlisted were more likely to indicate this than officers.



The last section of the survey gathered information about general attitudes towards the technologies discussed on the survey.

## Attitudes Towards Technology

Most Sailors like that mobile devices allow them to be more available to others and feel they are more productive because of their electronic devices. Boomers are more likely to need someone to help them with new electronic devices, and to find them stressful and annoying than Millennials and Gen X.

### % Responding "Very Well"/"Somewhat Well"

	Mill.	Gen X	Boomer	Overall
I like that cell phones and other mobile devices allow me to be more available to others	92	91	87	91 <sup>a, b, c</sup>
I often feel like my electronic devices can do more than what I actually use them for	82	83	86	83
When I get a new electronic device, I usually need someone else to set it up or show me how to use it	18	29	45	25 <sup>a, b, c</sup>
It is stressful to own and manage all of the different electronic devices I have	12	18	25	16 <sup>a, b, c</sup>
I often feel annoyed by having to respond to intrusions from my electronic devices	26	35	42	32 <sup>a, b, c</sup>
I believe I am more productive because of all of my electronic devices	81	81	79	81

Question 117

NPRST



The first part of the section asked how well six statements about electronic devices described the respondent. Two questions were very reflective of the respondents and showed no significant difference between the age groups; about 80 percent felt that their electronic devices can do more than what the respondent uses them for as well as believe that the respondent is more productive because of electronic devices.

Respondents agreed most strongly with the statement that they like that mobile devices make them more available to others; the difference between age groups was small (4–5%) however, this difference was significant between Boomers and the other two groups. Enlisted were more likely to feel the statement reflected them than officers.

The lowest affinity was to the statement about the stress of managing all of the electronic devices; only about 1 in 10 of Millennials felt this while 1 in 4 Boomers did.

The remaining two statements about needing help to set up new devices and feeling annoyed by intrusions from devices were only endorsed by less than one-third of respondents, but all age groups were significantly different. Women were more likely than men to need assistance with new devices, and enlisted were more likely to feel annoyed with electronic intrusions than officers.

Civilians who use the internet or have a cell phone were asked some of the same questions in late 2007. Sixty-eight percent indicated that their electronic devices made them more productive, 74 percent indicated that they were more available to others because of their electronic devices, and 48 percent indicated that they needed help to set up new devices (Horrigan & Jones, 2008).

## Technology Has Improved...

All respondents feel that the technologies on the survey have improved several aspects of their lives. Boomers are most likely to feel the technologies have improved their ability to do their Navy jobs.

% Responding "A Lot"/"Some"				
	Mill.	Gen X	Boomer	Overall
The way you pursue your hobbies or interests	83	81	71	81 <sup>b, c</sup>
Your ability to do your Navy job	71	83	89	78 <sup>a, b, c</sup>
Your ability to learn new things	86	91	89	89
Your ability to keep in touch with friends and family	92	94	94	93
Your ability to share your ideas and creations with others	80	83	81	81
Your ability to work with others in your community or in groups you belong to	76	80	82	79

Question 118

NPRST



Respondents indicated how much the technologies discussed on the survey impacted different components of their lives. Most see technology improving their ability to keep in touch with friends and family, a key issue for Sailors who often deploy or are assigned away from family. Almost as many feel technology has improved their ability to learn new things. The lowest agreement regarded technology improving the ability to work with others in the community or in groups to which they belong, although more than 3 in 4 felt there was at least some improvement.

Only two of the questions showed differences by age group; Millennials and Gen X are more likely than Boomers to feel technologies improve the way they pursue their hobbies or interests, and Boomers are most likely to feel that technologies improve their ability to do their job. When comparing enlisted and officers, enlisted are more likely than officers to feel that technologies have improved their ability to keep in touch with friends and family while officers are more likely than enlisted to feel that technology has improved their ability to do their job. In addition, men are more likely than women to feel technology has improved the way they pursue their hobbies/interests and their ability to learn new things.

Fifty-seven percent of civilians with access to the internet or a cell phone feel that technology has improved their ability to do their job (17% indicated that it does not apply) while 85 percent indicated that technology has improved their ability to keep in touch (Horrihan & Jones, 2008).

## Beliefs About Technology

Most Sailors feel comfortable with technology, indicating that they like using it, are confident in their ability to learn about it, and that it is a necessary skill. Millennials and Gen X Sailors are more likely than Boomers to wish they could use it more at work.

% Responding "Completely True"				
	Mill.	Gen X	Boomer	Overall
Knowing how to use technology is a necessary skill for me	74	75	70	75
I like using technology	79	74	64	76 <sup>b, c</sup>
I feel confident with my ability to learn about technology	80	74	65	76 <sup>b, c</sup>
Working with technology makes me nervous	6	6	6	6
I like using technology in my work	69	70	63	69 <sup>b</sup>
I wish I could use technology more frequently at work	57	54	41	54 <sup>b, c</sup>
Technology makes me feel stupid	5	3	4	4
I'm not the type to do well with technology	4	3	4	4
I feel uncomfortable using most technology	9	9	7	9

Question 119

NPRST



Seventeen survey questions asked respondents questions to gauge their comfort level with technology; results are provided on this page and the next in the same order as on the survey.

Three in four respondents indicated the statements about liking to use technology, feeling confident with their ability to learn technology, and the importance of knowing how to use technology were completely true of them. The first two of these showed age differences, with Boomers being significantly less likely to feel these were completely true statements than either Millennials or Gen X.

As can be seen in the two tables, most age differences were found for Boomers being different from both Millennials and Gen X.

Officers were more likely to believe that knowing how to use technology is a necessary skill, while enlisted were more likely to indicate that technology makes them nervous, that they want to use it more frequently at work, and that they feel uncomfortable using technology.

Men were more likely than women to indicate that they like using technology, feel confident about their ability to learn, want to use technology more frequently at work, and that they feel uncomfortable using technology.

## Beliefs About Technology (cont'd)

Millennials and Gen X Sailors feel most positive about technology.

% Responding "Completely True"				
	Mill.	Gen X	Boomer	Overall
Working with technology is boring	5	5	3	5
I know that if I work hard to learn about technology, I will do well	64	60	51	62 <sup>b, c</sup>
I think using technology will be difficult for me	4	3	2	3
Technology makes me feel uneasy and confused	3	2	3	3
Once I start using technology, I will find it hard to stop	34	32	23	33 <sup>b, c</sup>
Technology gives me more control over my life	41	40	32	40 <sup>b, c</sup>
Technology overloads me with too much information	5	6	9	6 <sup>c</sup>
Technology makes my life easier	62	56	46	58 <sup>b, c</sup>

Question 119

NPRST



Few indicated that the more negative statements (e.g., technology making them feel stupid, not being the type to do well with technology, technology making them uneasy/confused) were completely true of them, and the only age difference for these questions regarded information overload (Boomers being significantly more likely to indicate this than Millennials), although less than 10 percent indicated that this statement was completely true of them.

In the table above, the only significant difference found for paygrade group or gender was that enlisted were more likely than officers to indicate that technology makes life easier.

## Giving False Information Online

Boomer Sailors are the least likely to give false information online.

% Responding "Often" / "Always"				
How often have you given false information about yourself...	Mill.	Gen X	Boomer	Overall
When registering on a website	11	10	6	10 <sup>b, c</sup>
When providing feedback on a website	8	6	3	7 <sup>b, c</sup>
On a social networking site	9	7	3	8 <sup>b, c</sup>
Question 120				

NPRST



Three questions were added to the survey to gauge how often Sailors are dishonest online. Few indicated that they were often or always dishonest when registering on a website, providing feedback on a website, or on a social networking site. Again, Millennials and Gen X are the most similar, and Boomers are significantly dissimilar from the other age groups.

Recent research has found that men are more likely than women to misrepresent themselves online, especially to benefit other people or contexts (Hall, Park, Song, & Cody, 2010); contrary to this, no gender differences were found in the results of this study. However, enlisted indicated they were more likely than officers to give false information when providing feedback on a website (7% vs. 3%).

## Overall Summary (1 of 4)

NPRST



- Over 2/3 (71% overall) of all age groups are interested in teleworking
  - Less than half of Millennials believe teleworking is possible for their current or last shore-based job
- About 1/3 (48% of Millennials and 37% of Boomers) say teleworking would motivate them to stay in the Navy
- Most have access to computers away from work (84% overall own laptops) and 98% overall own cell phones, two technologies that may be useful for teleworking

This page and the next three cover the key summary points of the survey, relating to overall findings as well as age group differences.

Over two-thirds of all Sailors indicated they were interested in teleworking. However, less than half of Millennials believe that teleworking is possible for the current or last shore-based job, perhaps due to the nature of their job (e.g., maintenance of equipment). About one-third of all Sailors, and almost half of Millennials, say teleworking would motivate them to stay in the Navy.

In terms of what technologies are already owned that might enable teleworking, most have access to computers away from work and almost all own a cell phone.

## Overall Summary (2 of 4)

- Almost 60% of Gen X and Boomers are likely to have done something for their Navy job on a non-work computer in the last 30 days
- 93% use high-speed internet access away from work while 73% use WiFi
- E-mail is the most common social contact method of those surveyed, but 89% of Millennials visit social networking sites and 88% have their own page
  - Only 30% of Boomers have their own social networking page

NPRST



Teleworking is, in some ways, already occurring although it may not be formally sanctioned; almost 60 percent of Gen X and Boomers indicated they did something for their Navy job on a non-work computer in the last 30 days.

The majority of Sailors have high-speed internet access away from work, so productivity while teleworking likely would not be impacted by slow network speeds. Almost 3 in 4 use WiFi, which may introduce security issues that would need to be addressed in teleworking agreements.

E-mail is the most common social contact method of those discussed on the survey. Most Millennials visit social networking sites and have their own social networking webpage, as compared to only about 1 in 3 of the Boomers. With the recent shift in policy to specifically address the use of social media at work (Deputy Secretary of Defense, 2010), these numbers might increase in the immediate future.

## Overall Summary (3 of 4)

NPRST

- 96% already have taken or expect to take online courses
- Some online activities drop sharply for 18-20 year olds when comparing senior year of high school to the last 30 days
- Satisfaction with work computer is about 50%, including the computer itself, software, and the network
  - Satisfaction slightly higher for Boomers than the other generations
- 2/3 agree that web-based self-service initiatives are moving the Navy in the right direction

Online education is common in the Fleet, with almost all having taken a course online or expecting to do so in the future.

A concern anecdotally expressed is that technology use is curtailed when people join the Navy, an issue that might be noticed in reenlistment rates beyond the first term. Some online activities, particularly blogging and chat/IM do drop sharply for 18–20 year olds when compared to their senior year of high school.

While the survey was geared toward teleworking, questions were included about work computers. About half are satisfied with work computers, their software, and their network, and that satisfaction is slightly higher for Boomers than either Millennials or Gen X.

About two-thirds of Sailors feel that web-based self-service initiatives (e.g., JCMS, electronic service record) are moving the Navy in the right direction.

## Overall Summary (4 of 4)

NPRST



- Most Sailors have access to cell phones with text messaging, ranging from 85% of Millennials to 72% of Boomers
  - Millennials are the most likely group to have sent 50+ text messages in the last 30 days
- Over 40% of respondents to the survey agreed to take a concurrent Lightning Poll (survey via text message)
  - Nearly all who took the Lightning Poll thought it was easy to do
- All Sailors have positive beliefs about technology and its use, especially Millennials and Gen X

While most indicate they have cell phones, slightly fewer indicate they have text messaging on those cell phones. Millennials clearly are most likely to use text messaging, with most having text messaging and being the most likely age group to have sent 50+ text messages in the last 30 days.

Over 40 percent of respondents agreed to take a survey through text messaging, and nearly all those who did participate thought it was easy to do.

All Sailors have positive beliefs about technology and its use, although Millennials and Gen X are the most positive.



## Recommendations

- Release news article about results and next steps in using technologies for telework
- Provide results to relevant entities, including CIO and N16 (for IT-related findings) and NRC (for knowledge about recruiting Millennials)
- Continue efforts to enable teleworking for all age groups
  - Provide additional guidance to COs about how to facilitate teleworking at all commands
- Determine techniques to utilize social networking within the Navy
- Investigate the possible use of cell phones and text messaging as a Navy information channel

This survey served predominantly as a baseline assessment to determine interest in teleworking and what types of technology are accessible by Sailors. However, there are a few actionable recommendations related to these survey findings.

First, a news article about the results should be released that covers next steps in the use of technologies for telework. One of the common misconceptions about surveys is that nothing happens with the results (Uriell & Schultz, 2008), and this might help alleviate that concern.

Second, results should be briefed to relevant parties, including the CIO, N16, and NRC.

Third, efforts to enable teleworking should continue for all age groups. A possible reinforcement method might be to put together guidance for COs about how to facilitate teleworking at all commands.

Fourth, determine techniques to best utilize social networking within the Navy, considering almost all Millennials access social networking sites. Some entities have presences online (e.g., Navy Exchange, Navy detailers, Navy Recruiting Command) and lessons learned should be shared across the Navy.

Lastly, almost everyone has a cell phone and most have text messaging, so this should be investigated as a possible communication channel within the Navy.

In addition, in light of the recent change in policy regarding accessing social networking sites, re-administration of the survey in a year may be appropriate.



A few questions were asked on the survey that were not deemed useful in the broader briefing. Those results are presented as backup.

## Video Games

Almost ¾ (73%) played video games in the last 30 days, ranging from 80% of Millennials to 46% of Boomers, with most playing less than an hour in a typical day. Of those who own a portable game system, 63% take them when they deploy (70% of Millennials vs 32% of Boomers).

Video Game Hardware (% who selected)

	Millennial	Gen X	Boomer	Overall
Desktop computer	28	42	49	35 <sup>a, c</sup>
Laptop computer	47	39	37	43 <sup>c</sup>
Game console	82	72	50	76 <sup>a, b, c</sup>
Portable gaming system	29	25	15	26 <sup>b, c</sup>
Cell phone	29	18	10	23 <sup>a, b, c</sup>

Video Game Location (% "Yes")

	Millennial	Gen X	Boomer	Overall
By myself	85	82	76	83 <sup>c</sup>
With others in same location	72	59	37	65 <sup>a, b, c</sup>
With others over Internet	47	30	14	38 <sup>a, b, c</sup>

Questions 97 and 98

Note: Only includes those played video games in the last 30 days.

NPRST



Respondents were asked about video games, particularly what they use to play video games and the location of those with whom they choose to play. Most play video games through a video game console, although the percentage decreases as the age group increases. About one-third of Millennials play video games on their cell phones, perhaps due to the fact that Millennials are more likely to have higher-end phones.

Enlisted Sailors and men are more likely to have played video games in the last 30 days than officers and women (respectively). Enlisted were also more likely to use portable gaming systems or cell phones than officers. Men were more likely to play games on game consoles while women were more likely to play on laptops or cell phones.

One of the top technology trends for 2009 was games being played online (often on Facebook or similar social networking sites) more than being confined within a dwelling (Sutter, 2009). The survey asked the location of the person with whom the Sailor played. The majority opt to play by themselves, however almost 3 in 4 Millennials play with someone else in their same location and almost half play with someone over the Internet. Boomers are significantly different from Millennials for all three of these questions, and Gen X are also significantly different from Millennials for playing with others in either the same location or over the internet.

Enlisted Sailors and men were more likely to play games with others over the Internet than officers and women (respectively). Men also were more likely than women to play games by themselves and with others in the same location.

Those who own a portable game system were asked if they would (or had) taken it on deployment with them. Seventy percent of Millennials would take it, a much larger percentage than Boomers. Enlisted and men were more likely to indicate they would take it on deployment than officers and women (respectively).

## PDA Capabilities – Millennial

Twenty-nine percent of Millennials have a personal PDA (e.g., Blackberry, Palm) that is not part of a cell phone. Six percent indicate they have a work PDA. Most of the personal PDAs have music and game capabilities, while work PDAs have e-mail and internet capabilities, also the two most desired features of a work PDA.

	% Responding "Yes"		
	Personal PDA (if owned)	Work PDA (if have)	Desired Work PDA *
Take still pictures	66	81	---
Play music/MP3	83	81	32
Send and receive text messages	75	80	64 **
Send and receive e-mail	77	93	77
Take video	49	60	---
Play video ***	59	60	32
Play games	83	86	---
Surf internet	79	90	73
Run applications	68	70	63

Questions 101, 103, and 104  
 Note: \* Desired work PDA features based upon question with multiple selections allowed.  
 \*\* 47% would like MMS.  
 \*\*\* "Video download" listed as the desired work PDA feature.

NPRST



This and the next two tables show PDA (not part of a cell phone) capabilities by age groups (overall results were presented in the main brief). The most common attributes of personally owned PDAs are playing games and music, surfing the internet, and receiving e-mail or text messages. Work PDAs are clearly more work focused, with the most common features being for e-mail or surfing the internet, also the most desired features for work PDAs.

## PDA Capabilities – Generation X

One third of Gen X have a personal PDA, and 10% indicate they have a work PDA. As with Millennials, the most common features of personal PDAs are the ability to play games and music, while the work PDA can send e-mail and surf the internet, desired features of work PDAs.

% Responding "Yes"			
	Personal PDA	Work PDA	Desired Work PDA *
Take still pictures	50	39	---
Play music/MP3	73	62	23
Send and receive text messages	64	76	63 **
Send and receive e-mail	67	87	83
Take video	38	32	---
Play video ***	48	37	25
Play games	78	66	---
Surf internet	68	81	71
Run applications	69	69	68

Questions 101, 103, and 104

Note: \* Desired work PDA features based upon question with multiple selections allowed.

\*\* 43% would like MMS

\*\*\* "Video download" listed as the desired work PDA feature.

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Features of Gen X PDAs are similar to those of Millennials, although running applications is slightly higher in rank. Again, work PDAs are predominantly for e-mail and internet.

## PDA Capabilities – Boomer

Thirty-four percent of Boomers have a personal PDA. One quarter indicate they have a work PDA. Games, applications, and e-mail are the most common features of a personal PDA, while work PDAs are most likely to send/receive e-mail and surf the internet.

	% Responding "Yes"		
	Personal PDA	Work PDA	Desired Work PDA *
Take still pictures	37	13	---
Play music/MP3	57	30	20
Send and receive text messages	60	69	54 **
Send and receive e-mail	65	94	85
Take video	29	9	---
Play video ***	32	12	20
Play games	69	45	---
Surf internet	60	72	71
Run applications	66	50	61

Questions 101, 103, and 104

Note: \* Desired work PDA features based upon question with multiple selections allowed.

\*\* 36% would like MMS

\*\*\* "Video download" listed as the desired work PDA feature.

NPRST



Only about one-third of Boomers indicated they have a personal PDA and percentages for each of the functions is somewhat lower than Millennials and Gen X. About two-thirds of Boomers indicate their personal PDAs can play games, run applications, and receive e-mail. Work PDAs are predominantly for e-mail.



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## **Appendix A: Executive Summary Brief**



# Results of the 2008/9 Navy Telework and Technology Survey

Zannette A. Uriell  
Evangeline M. Clewis

Executive Summary Briefing  
10 March 2009



2008 Navy Telework and Technology Survey

## Telework Background

- In 2000, Public Law 106-346, §359, indicated that all executive agencies needed to introduce policies for telecommuting
- Telework can be defined as “the ability to do your work at a location other than your ‘official duty station’”
- Task Force Life/Work (N134) has been promoting the use of telework in the Navy
  - N1 policy released in October 2008; CHNAVPERSNOTE 5330, Total Force Telework Program
  - Virtual Command Pilot Program implemented in late 2008 (NNS081230-03)



2

## Technology Background

- In FY08-09, Office of Naval Research funded the PISCES initiative to look at alternative methods of data collection
  - Determination of what technologies may be useable for new and enhanced data collection (e.g., virtual focus groups through social networking sites, text message surveys)
- Current survey:
  - First ever Navy-wide look at telework interest and technology use
  - Most extensive Navy survey of generational age groups ever conducted

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## Generational Counts

Enlisted				Officers			
	Mill.	Gen X	Boomers		Mill.	Gen X	Boomers
E-2 to E-3	48,038	3,575	1	WO	--	666	685
E-4	40,486	7,506	2	ENS	1,742	572	1
E-5	30,861	32,711	406	LTJG	3,308	1,935	9
E-6	3,596	42,691	1,388	LT	800	14,511	591
E-7	12	20,092	1,810	LCDR	--	9,079	1,553
E-8	--	4,636	1,512	CDR	--	4,391	2,713
E-9	--	878	1,733	CAPT	--	82	3,191
	122,993	112,089	6,852		5,850	31,236	8,743
	<b>51%</b>	<b>46%</b>	<b>3%</b>		<b>13%</b>	<b>68%</b>	<b>19%</b>

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Note: Millennials: 27 years of age or younger; Generation X: 28 – 43 years of age; Baby Boomers: 44+ years of age Surveyable population, from Active Duty Master Records of January 2009

## Method and Response Rates

- Random sample stratified by generational age groups (Millennials, Generation X, and Baby Boomer)
- Notification letter, including web address of survey and user ID, sent in October 2008; 3 reminder letters sent before field closed in January 2009
- Responses statistically weighted to be representative of the Navy

	Millennial (27 & under)	Generation X (28 to 43)	Baby Boomer (44 & above)	Overall
Sent	6,446	4,819	2,959	14,224
Accessed	1,013	1,151	1,073	3,280
Useable	931	1,113	1,054	3,098
Return-to-Sender	837	787	605	2,229
Weighted Response Rate	21%	32%	44%	27%
Maximum Margin of Error for Primary Questions	± 4.1%	± 3.5%	± 3.5%	± 2.5%

Note: Response rates similar to typical Navy-wide web-based survey response rates.

5

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## Demographics

There are some key demographic differences between the three generations, as illustrated below. Those older, perhaps because of paygrade, are more likely to be assigned to shore duty than the Millennials. Boomers are also more likely to have attended at least some college and have a family.

	% Responding "Yes"			
	Millennial	Gen X	Boomer	Overall
On shore duty (Type 1, 3, or 6)	50	60	72	57 <sup>a, b, c</sup>
Deployed	10	9	7	9
Male	83	88	88	85
Attended some college	64	87	93	77 <sup>a, b, c</sup>
Have family (spouse and/or children)	50	84	90	69 <sup>a, b, c</sup>
Have 5 years or more of Internet use	94	98	99	96 <sup>a, c</sup>

Questions 4, 5, 7, 10, 11, 12, and 13

6

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# Telework

Telework was defined on the survey as "the ability to do your work at a location other than your 'official duty station.'" Younger Sailors are less likely than both Gen X and Boomers to have teleworked or know someone who has teleworked. About 2/3 of all three age groups are interested in teleworking, but both of the older generations are more likely than Millennials to believe it is possible to telework in their current jobs.

% "Yes"				
	Millennial	Gen X	Boomer	Overall
Have you teleworked at least one day (at previous shore command) *	18	25	26	23 <sup>a, c</sup>
Do you know someone at your command (previous shore command) who has teleworked *	25	35	40	32 <sup>a, c</sup>
Interested in teleworking	68	74	69	71
Do you believe teleworking is possible in your current (last shore-based) job *	45	62	64	56 <sup>a, c</sup>

Questions 14/17, 15/18, 16/19, and 21/2, reflecting teleworking at current or previous (if on sea duty) shore command.  
 Note: \* Those who have not yet been on shore duty not included.



# Telework Impact on Retention

About half of Sailors (48% of Millennials but 37% of Boomers) indicate that the ability to telework would motivate them to remain in the Navy. Only 3% indicate that it would motivate them to leave the Navy.

How would the ability to telework impact your desire to stay in the Navy?				
	Millennial	Gen X	Boomer	Overall
It would motivate me to remain in the Navy	48	44	37	45 <sup>b, c</sup>
It would have no impact on my motivation to remain in the Navy	50	53	59	52
It would motivate me to leave the Navy	3	3	4	3

Question 20



# Attitudes Towards Technology

Most Sailors like that mobile devices allow them to be more available to others and feel they are more productive because of their electronic devices. Boomers are more likely to need someone to help them with new electronic devices, and to find them stressful and annoying than Millennials and Gen X.

## % Responding "Very Well"/"Somewhat Well"

	Mill.	Gen X	Boomer	Overall
I like that cell phones and other mobile devices allow me to be more available to others	92	91	87	91 <sup>b, c</sup>
I often feel like my electronic devices can do more than what I actually use them for	82	83	86	83
When I get a new electronic device, I usually need someone else to set it up or show me how to use it	18	29	45	25 <sup>a, b, c</sup>
It is stressful to own and manage all of the different electronic devices I have	12	18	25	16 <sup>a, b, c</sup>
I often feel annoyed by having to respond to intrusions from my electronic devices	26	35	42	32 <sup>a, b, c</sup>
I believe I am more productive because of all of my electronic devices	81	81	79	81

Question 117

9

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# Technology Has Improved...

All respondents feel that the technologies on the survey have improved several aspects of their lives. Boomers are most likely to feel the technologies have improved their ability to do their Navy jobs.

## % Responding "A Lot"/"Some"

	Mill.	Gen X	Boomer	Overall
The way you pursue your hobbies or interests	83	81	71	81 <sup>b, c</sup>
Your ability to do your Navy job	71	83	89	78 <sup>a, b, c</sup>
Your ability to learn new things	86	91	89	89
Your ability to keep in touch with friends and family	92	94	94	93
Your ability to share your ideas and creations with others	80	83	81	81
Your ability to work with others in your community or in groups you belong to	76	80	82	79

Question 118

10

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## Personally Owned Technology

Most people (99% overall) have access to a computer away from work, with 84% owning a laptop computer. Of those who own a laptop, 65% overall (more Millennials than Boomers) take their laptop on deployment, with the majority who did not take it indicating that they did not want to. Additionally, 98% of Sailors own a cell phone.

% "Yes"				
	Millennial	Gen X	Boomer	Overall
Desktop computer	51	82	89	69 <sup>a, b, c</sup>
Laptop computer	83	84	82	84
Personal Digital Assistant (PDA)	28	33	34	31
Cell phone	99	97	94	98 <sup>b, c</sup>
MP3 Player	88	84	73	85 <sup>b, c</sup>
Digital Camera	88	95	94	92 <sup>a, c</sup>
Camcorder	39	65	67	54 <sup>a, c</sup>
Webcam	61	63	51	61 <sup>b, c</sup>
E-book reader	8	9	9	9

Question 23

11

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## Use of Computers Outside Work

About half or more (61% overall) used computers several times a day in the last 30 days, with about another quarter (23% overall) using it once a day. Most (71% overall) are on PC computers with Windows XP (52% overall) or Vista (38% overall). Almost all Sailors (95% overall) access the internet on their computers. Millennials are more likely than those older to have played games or watched DVDs on their computers in the last 30 days while both Gen X and Boomers are more likely to do work for their Navy job or use spreadsheets than those younger.

Top 5 uses of non-work computer in the last 30 days			
Millennial	Gen X	Boomer	Overall
Internet for any purpose (95%)	Internet for any purpose (95%)	Internet for any purpose (96%)	Internet for any purpose (95%)
Photos/Graphics (69%)	Photos/Graphics (72%)	Word processing (81%)	Photos/Graphics (70%)
Word processing (61%)	Word processing (72%)	Photos/Graphics (68%)	Word processing (68%) <sup>a, b, c</sup>
Played games (59%)	Something for Navy job (58%)	Something for Navy job (61%)	Played games (51%) <sup>a, b, c</sup>
Watched DVD (56%)	Spreadsheets (53%)	Spreadsheets (53%)	Something for Navy job (50%) <sup>a, c</sup>

Question 37

12

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# Social Networking

Most (99% overall) have used e-mail from any location in the last 30 days. Most only use a web-based e-mail account at home (67% overall, 80% of Millennials). Millennials are most likely to have visited a social networking site in the last 30 days or have ever created their own page (89% and 88%, respectively, compared to 44% and 30%, respectively, of Boomers). Of those who have a social networking page, about 2/3 (61% overall) indicate that it is visible to the general public.

% "Yes"				
	Millennial	Gen X	Boomer	Overall
E-mail in the last 30 days	99	99	99	99
Ever subscribed to electronic mailing list **	45	51	47	48
Visit Facebook, MySpace, etc. in the last 30 days*	89	69	44	76 a, b, c
Ever created Facebook, MySpace, etc. page	88	61	30	71 a, b, c
Ever had blog	13	6	4	9 a, c
Read blog in last 30 days **	40	36	33	38
Ever contributed to Wiki	10	7	7	8
Chat in last 30 days	53	38	24	44 a, b, c

Questions 41, 45, 48, 46, 50, 51, 52, 53, and 54

Note: \* Answer choices collapsed to show percent who accessed social networking sites at all within the last 30 days.

\*\* Don't know not included.

13

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# Online Activities of those 18-20

Those 20 years old or younger were asked about activities during their senior year of high school, since they may not have yet established their own households. E-mailing and accessing social networks has increased for this population, but reading blogs, writing blogs, chat, and accessing virtual worlds have decreased.

% "Yes"		
	During Senior Year of High School	In last 30 days
Send e-mail	90	97
Access social networking	82	88
Read blog	63	35
Write blog	37	18
Chat/IM	72	52
VoIP	27	24
Access virtual world	12	3

Questions 72, 41, 48, 51, 50, 53, 55, and 56

14

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# Cell Phone Ownership and Text Messaging

Most Sailors have at least a personal cell phone, if not a personal and work cell phone. The majority also have access to text messaging, although this ranges from 85% of Millennials to 72% of Boomers.

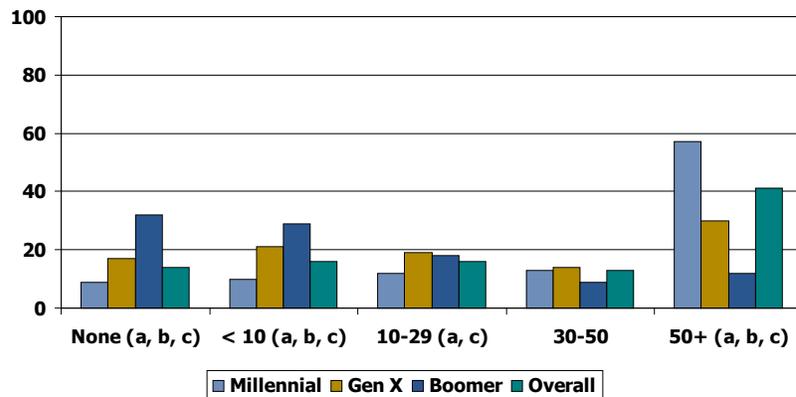
% Responding "Yes"				
	Millennial	Gen X	Boomer	Overall
Currently have a work cell phone	12	19	33	17 <sup>a, b, c</sup>
Have text messaging on work cell phone	80	67	59	70
Have personal cell phone	99	97	94	98 <sup>b, c</sup>
Personal cell phone capable of doing text messaging	95	94	89	94 <sup>b, c</sup>
Pay for text messaging	88	83	75	85 <sup>a, b, c</sup>
% Responding "Yes" (composite)				
Have work cell phone with text messaging	9	13	20	12 <sup>b, c</sup>
Have personal cell phone with text messaging	83	76	65	79 <sup>a, b, c</sup>
Have any cell phone with text messaging	85	79	72	81 <sup>b, c</sup>

Questions 105, 106, 23, 108, and 109



# Number of Messages Sent in Last 30 Days

Millennials are most likely of all three groups to send 50 or more messages in the last 30 days (57% compared to 12% of Boomers). About 1/3 of Boomers had not sent text messages in the last 30 days.



## Results of Lightning Poll

Respondents were asked if they would be interested in participating in a Lightning Poll, or survey conducted by text message. Respondents were told that 11 messages would be used for this Lightning Poll, including 5 questions, 5 answers, and a thank you message. Forty-two percent of respondents overall indicated interest in participating in the concurrent Lightning Poll, with a slightly higher percentage of Millennials (45%) than Boomers (36%).

Percentage...				
	Mill.	Gen X	Boomer	Overall
How satisfied are you with your Navy job? (% Satisfied)	64	77	82	71 <sup>c</sup>
Are you satisfied with your command leadership's support of quality of work life programs (e.g., telework)? (% Yes)	26	35	34	31
How would you rate the overall morale of your present command? (% High)	25	31	45	29 <sup>c</sup>
How satisfied are you with the amount of stress in your life? (% Satisfied)	33	40	33	36
Was this survey easy to do? (% Yes)	96	97	98	96

Lightning Poll Questions 1-5

Note: Results weighted to estimated Navy population with text message access.

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17

## Survey Highlights

- Nearly ¼ have teleworked at least one day at previous shore command
  - Almost ¾ are interested in teleworking; ½ say ability to telework would motivate them to stay Navy
  - 60% of Gen X and Boomers are likely to have done something for their Navy job on non-work computer in last 30 days
- 90% of Millennials have visited social networking site in last 30 days
  - 88% of Millennials but just 30% of Boomers have their own social networking page
- Just over ½ are satisfied with their Navy work computers and primary computer networks
- Over 40% of respondents agreed to take concurrent Lightning Poll (survey via text message)
  - Nearly all who took Lightning Poll thought it was easy to do
- Over ¾ believe technology has improved ability to do their Navy jobs
- Millennials and Boomers most dissimilar in uses of technology; Gen X sometimes similar to Millennials, sometimes similar to Boomers

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18

## Recommendations

- Release news article about results and next steps in using technologies for telework
- Provide results to relevant entities, including CIO and N16 (for IT-related findings) and NRC (for knowledge about recruiting Millennials)
- Continue efforts to enable teleworking for all age groups
  - Provide additional guidance to COs about how to facilitate teleworking at all commands
- Determine techniques to utilize social networking within the Navy
- Investigate the possible use of cell phones and text messaging as a Navy information channel

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Backup

# Work Computer Satisfaction

Most Sailors (79% overall) access a computer several times a day (only 64% of Millennials) for their Navy job. Half overall have access to own workstation (32% of Millennials, 62% of Gen X, and 88% of Boomers). About half are satisfied with the work computer itself (higher for Boomers). About ¾ overall have all software they need to do their job, although only 58% indicate they are satisfied with the software they usually use. The majority are primarily on the NMCI network (54% overall), although about 1/3 of Millennials indicated they did not know their network. About half are satisfied with their primary network (higher for Boomers).

% Responding "Very Satisfied"/"Satisfied"				
	Millennial	Gen X	Boomer	Overall
Satisfied with work computer (i.e., speed, monitor size, etc.)	47	59	68	54 <sup>a, b, c</sup>
Satisfied with software usually used	53	62	71	58 <sup>a, b, c</sup>
Satisfied with primary network	49	55	60	53 <sup>c</sup>

Questions 75, 76, and 79

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## **Appendix B: Results of Text Message Survey**



# Text-Message Surveys: Results in a Flash

Zannette Uriell & Evangeline Clewis  
Navy Personnel Research, Studies, and Technology

Presentation to the 64th Annual AAPOR Conference  
16 May 2009



The opinions expressed are those of the authors.  
They are not official and do not represent the views of the Department of the Navy.

## Overview

- Text Messaging Background
- Attitudes towards Text Message Surveys (Study 1)
- Demographics of Text Message Respondents (Study 2)
- Comparison of Results to Web-based Survey Results (Study 2)
- Summary

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2

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## Background

- As of June 2008, 87% of US population had cell phones with 110.4 billion messages sent monthly
- Sending and receiving text messages is most common for those ages 18-29, with 60% of those in this group sending text messages daily as compared to 2% of those 65+
- Common business uses include voting, spreading information, organizing events, or making purchases
- Less common to use for data collection
  - Some have used successfully for diaries
  - Usually used as notification for surveys conducted by other means

3

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## Hypotheses

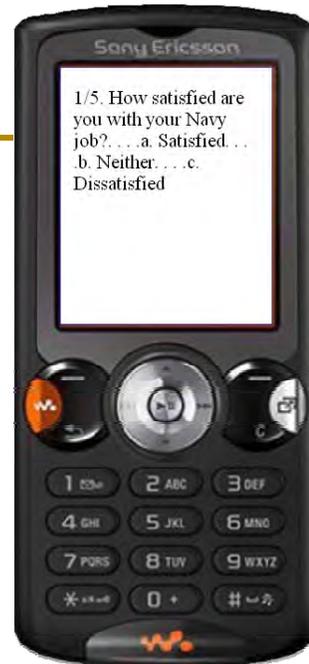
1. Text message surveys are easy and more convenient than other Navy surveys
2. Younger respondents will be more likely to use text messaging than older respondents
3. Younger respondents will be more likely to complete a text message survey than older respondents
4. Results of text message surveys will be comparable to those obtained on web-based Navy surveys
5. Response time for 1<sup>st</sup> question will be less than an hour, with response times for succeeding questions being less than 2 minutes

4



## Lightning Poll Format

- Question and answer text has to be 140 characters or less
  - May need modification of answers (e.g., 3-point scale instead of 5-point scale)
- No special characters (e.g., hard return, extra spaces)
- Different answer choices should be used for each question (e.g., X/Y/Z for question 1 and A/B/C for question 2)
- Progress bar may be included as part of question number (e.g., 1/3., 2/3., 3/3.)



5



## Study 1 Method

- Recruiters with Navy-funded cell phones were sent letters 29 May 2008 notifying them of Privacy Act for upcoming text message survey
- Initial text-message survey question sent on 9 June 2008
  - Second message sent only if respondent replied to first
- Follow-up paper-based survey sent 16 June

Number sent and received	
Eligible Sample:	4,620
Number Who Replied to Text:	2,317
Undeliverable Surveys:	273
Returned Follow-up Surveys:	1,479
Response Rates	
Text Survey:	49%*
Follow-up Survey:	34%

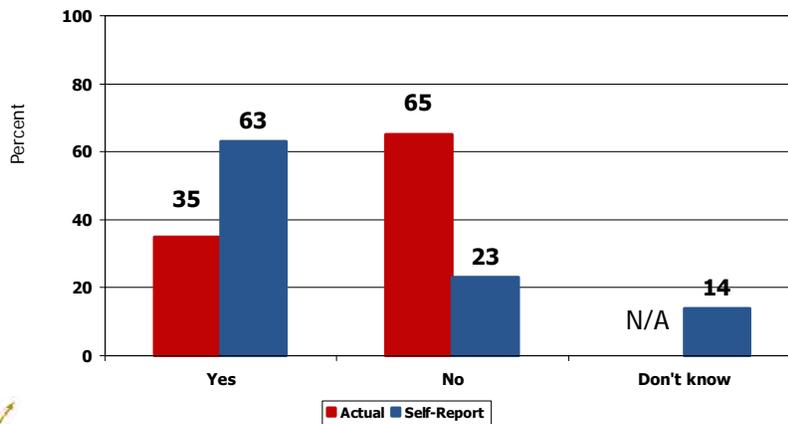
Note: Field actually left open until the follow-up survey field closed, but included analyses only based on text messages sent and received in first week and a half (prior to June 18, 2008).

\* Based on those who replied anything to first question.

6

## Percent Who Completed Lightning Poll

While 49% responded to the first message, only 35% provided answers to both questions on the Lightning Poll.

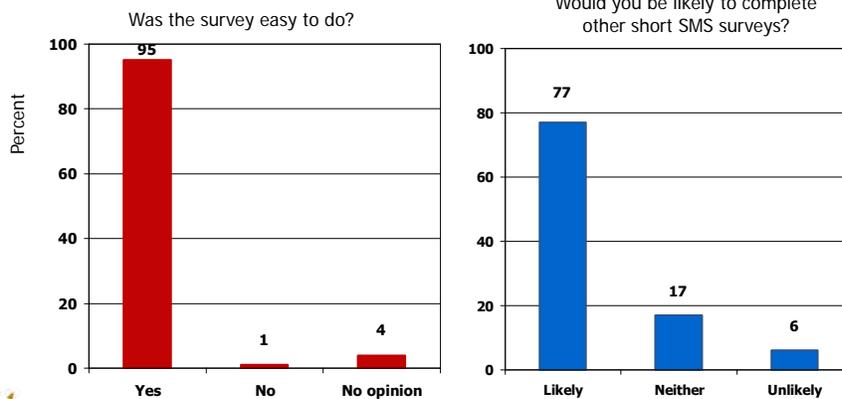


\* Actual numbers based upon those who provided two answers. "Don't know" option not possible.  
Follow-up Survey, Q4

7

## Survey Ease and Likelihood to Do Other Surveys

Almost all of those who completed the Lightning Poll thought it was easy and would be likely to do other short SMS surveys.

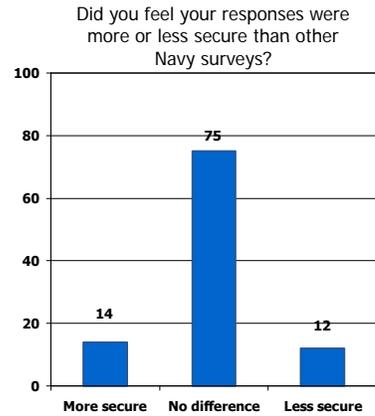
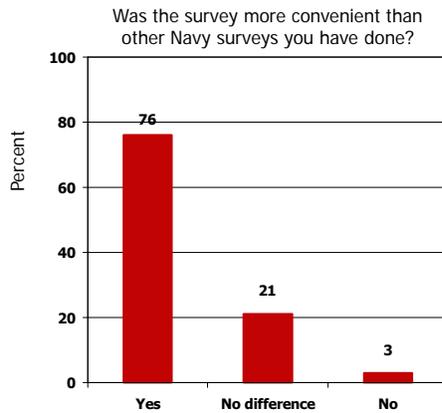


\* Results only for those who provided two answers to the Lightning Poll.  
Follow-up Survey, Q5 & Q8

8

# Lightning Poll Compared to Other Navy Surveys

## Lightning Polls more convenient and as secure as other Navy surveys.



\* Results only for those who provided two answers to the Lightning Poll and had participated in other Navy surveys.

Follow-up Survey, Q6 & Q7

9

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# Study 2 - Method and Response Rates

- Random sample stratified by generational age groups (Millennials, Generation X, and Baby Boomer)
- Notification letter, including web address of survey and user ID, sent in October 2008; 3 reminder letters sent before field closed in January 2009
- Lightning Poll questions were sent every Wednesday to those who had recently provided cell phone number on web-based survey
- Responses statistically weighted to be representative of the Navy; LP results weighted to estimated Navy population with text message access

	Millennial (27 & under)	Generation X (28 to 43)	Baby Boomer (44 & above)	Overall
Sent	6,446	4,819	2,959	14,224
Accessed	1,013	1,151	1,073	3,280
Useable	931	1,113	1,054	3,098
Return-to-Sender	837	787	605	2,229
Weighted Response Rate	21%	32%	44%	27%
Maximum Margin of Error for Primary Questions	± 4.1%	± 3.5%	± 3.5%	± 2.5%

Note: Response rates similar to typical Navy-wide web-based survey response rates.

10

NPRST



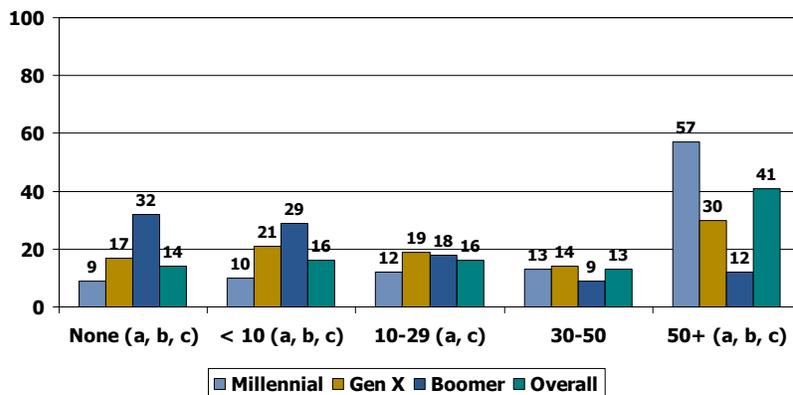
## Text Messaging and Participation in a Text Message Survey

	% with text messaging	% w/ text access who agreed to participate in text message survey	Of those who agreed to participate. . .		
			% who did not respond	% with less than 5 answers	% with 5 useable answers
<b>Overall</b>	<b>81</b>	<b>42</b>	<b>22</b>	<b>26</b>	<b>52</b>
Male	85	42	21	27	52
Female	80	42	25	24	51
Enlisted	82	43	21	27	52
Officer	76	40	24	24	53
Millennial	85	45	22	25	53
Generation X	79	40	20	28	52
Baby Boomer	72	36	29	26	45
Non-texter	58	16	50	15	35
Light texter	92	37	26	30	45
Heavy texter	95	54	16	25	60

11

## Number of Messages Sent in Last 30 Days

Of those who own personal cell phones, Millennials are most likely of all three age groups to have sent 50 or more messages in the last 30 days (57% compared to 12% of Boomers). About 1/3 of Boomers had not sent text messages in the last 30 days.



12

## Results of Lightning Poll

Respondents were asked if they would be interested in participating in a Lightning Poll, or survey conducted by text message. Respondents were told that 11 messages would be used for this Lightning Poll, including 5 questions, 5 answers, and a thank you message. Forty-two percent of respondents overall indicated interest in participating in the concurrent Lightning Poll, with a slightly higher percentage of Millennials (45%) than Boomers (36%).

Percentage...				
	Enlisted		Officer	
	LP	NPS 07	LP	NPS 07
1. How satisfied are you with your Navy job? (% Satisfied)	71	59	71	73
3. How would you rate the overall morale of your present command? (% High)	25	28	45	46
	LP	PFR 07	LP	PFR07
4. How satisfied are you with the amount of stress in your life? (% Satisfied)	34	41	48	51
	Enlisted		Officer	
5. Was this survey easy to do? (% Yes)	96		97	

Lightning Poll Questions

13

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## Reasons for Not Participating in Lightning Poll

Of the 58% who did not want to participate in the Lightning Poll, over half indicated that they did not want to because their cell phone was for their purposes only. Fifty-two percent of those who did not want to take the text message survey indicated that they would participate if the Navy paid for the text messages or provided a cell phone with text messaging.

% Who Selected...				
	Millennial	Gen X	Boomer	Overall
My cell phone is for my purposes only	61	56	51	58
I don't want to use any of my message allowance	16	14	13	15
I don't want the Navy to have my cell phone number	11	6	3	8
I don't think that the texts will be limited to 11	6	6	4	6
I think my cell phone number will be saved and used for other purposes	20	13	7	16
Other	32	34	46	34

14

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## Response Times for Key Completion Rates

Response Time for All Respondents (in minutes)					
Group	Q1	Q2	Q3	Q4	Q5
25% of responses	2	1	1	0	0
33% of responses	3	1	1	0	0
50% of responses	15	1	1	1	0
67% of responses	78	4	2	1	1
75% of responses	159	10	3	2	3

Note: Only includes those who provided useable responses immediately following a text message question.



## Summary (1 of 3)

- Text message surveys are easy and more convenient than other Navy surveys
  - 95% of respondents said Study 1 text message survey was easy (96% of those in Study 2)
  - Most said text message survey was more convenient yet as secure as other Navy surveys
- Younger respondents will be more likely to use text messaging than older respondents
  - Over half of Millennials with personal cell phones had sent more than 50 text messages in last 30 days compared to 12% of Boomers
    - 32% of Boomers had sent none while another 29% had sent less than 10



## Summary (2 of 3)

- 3. Younger respondents will be more likely to complete a text message survey than older respondents
  - Over half of those who agreed to participate in the text message survey actually completed all 5 questions
    - » Rates are similar for most demographics, but vary for age (from 45% of Boomer to 53% of Millennial) and for texting habits (from 35% of non-texters to 60% of heavy texters)
- 4. Results of text message surveys will be comparable to those obtained on web-based Navy surveys
  - Results for text message surveys are comparable for officer population but results are mixed for enlisted population



## Summary (3 of 3)

- 5. Response time for 1<sup>st</sup> question will be less than an hour, with response times for succeeding questions being less than 2 minutes
  - Longer times needed to complete first text message question, but over half of respondents took less than 1 minute to complete 5<sup>th</sup> text message question



## Potential Future Directions

- Conduct concurrent multi-mode surveys to better examine similarities/differences in results
- Vary survey content and sample to determine if some topics or groups lend themselves better to text message surveys
- Investigate possibility of universal cell phone access for Navy personnel or for panel

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19

To experience a  
Lightning Poll, send a  
text message to:  
901 451-1522

Three demo questions are available.  
Answers will NOT be retained or analyzed.  
All cell phone numbers will be deleted  
within a week.



## Contacts

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**Appendix C:  
Navy Telework and Technology Survey**



# Chief of Naval Personnel

Washington, DC

## Telework and Technology Survey



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Navy Personnel Research, Studies, and Technology  
Millington, TN 38055-1400



Dear Survey Participant,

The CNO has indicated that he wants the Navy “to be recognized as one of the top 50 employers” (SNA symposium, Jan 08). Related to this goal are efforts to better balance work and life. Telework is one initiative being explored. In order to determine interest in teleworking and what technology is currently available outside of the work environment to use for teleworking, you are one of a select group who is being asked to participate in the Navy’s first Telework and Technology Survey.

Participation is voluntary, but YOUR feedback is important in providing an accurate picture. Be assured that the information you give will not be attributed to you personally, nor will anything you say have a direct impact on your career. Only numerical results will be provided as part of an effort to better understand and expand technology capabilities in the Navy.

#### PRIVACY NOTICE

Authority to request this information is granted under Title 5, U.S. Code 301, and Department of the Navy Regulations. License to administer this survey is granted under OPNAV Report Control Symbol 12620-1, which expires on 30 September 2010.

**PURPOSE:** The purpose of this questionnaire is to collect data to evaluate existing and proposed Navy personnel policies, procedures, and programs.

**ROUTINE USES:** The information provided in this questionnaire will be analyzed by the Navy Personnel Research, Studies, and Technology Division. The data files will be maintained by the Navy Personnel Research, Studies, and Technology Division where they may be used for determining changing trends in the Navy.

**ANONYMITY:** All responses will be held in confidence by the Navy Personnel Research, Studies, and Technology Division. Information you provide will be considered only when statistically summarized with the responses of others, and will not be attributable to any single individual.

**PARTICIPATION:** Completion of this questionnaire is entirely voluntary. Failure to respond to any of the questions will NOT result in any penalties except possible lack of representation of your views in the final results and outcomes.

**This survey is being conducted by the Institute for Organizational Assessment at the Navy Personnel Research, Studies, and Technology Division (NPRST) of the Bureau of Naval Personnel. If you have any questions regarding this study, please contact: zannette.uriell@navy.mil .**

## BACKGROUND

**1. What is your paygrade/rank?**

- E1       W2       O1/O1E
- E2       W3       O2/O2E
- E3       W4       O3/O3E
- E4       W5       O4
- E5                       O5
- E6                       O6
- E7                       O7 or
- E8                                      above
- E9

**2. How long have you been on active duty in the Navy?**

- Less than 2 years
- 2-6 years
- 7-10 years
- More than 10 years

**3. How old are you?**

\_\_\_\_\_ years

**4. What type of duty or billet is your current assignment?**

- CONUS Shore Duty (Type 1)
- CONUS Homeported Deployable Sea Duty (Type 2)
- OCONUS Shore Duty (counts as sea duty for rotational purposes) (Type 3)
- OCONUS Homeported Deployable Sea Duty (Type 4)
- OCONUS "Preferred" Shore Duty (Type 6)
- Other duty (i.e., Duty Under Instruction, special duty, etc.)
- I don't know

**5. Are you presently on deployment (i.e., scheduled time away from homeport for 30 days or more)?**

- Yes
- No

**6. What is the geographical location of your current assignment? If you are currently on deployment, where is your command homeported?**

- Alaska or Hawaii
  - Caribbean
  - CONUS - East Coast
  - CONUS - West Coast
  - CONUS - Other (e.g., Millington, Great Lakes, etc.)
  - Europe (including the Mediterranean)
  - Far East
  - Middle East (including the African continent, Bahrain, etc.)
  - South or Central America
  - Other:
- \_\_\_\_\_

**7. Are you...?**

- Male
- Female

**The answers for the following questions are based on standard DoD race and ethnicity categories.**

**8. Are you of Spanish, Hispanic, or Latino origin?**

- Yes
- No

**9. What is your racial background? *If you are of mixed heritage, please select the response(s) with which you MOST closely identify.* (Mark ALL that apply.)**

- American Indian or Alaska Native
- Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, etc.)
- Black or African-American
- Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian, Chamorro, etc.)
- White

**10. What is highest level of education you have completed?**

- Less than high school completion/no diploma
- Alternate degree/ GED/homestudy/adult-school certification
- High school diploma/graduate
- Some college, no degree
- Associate's degree or other 2-year degree (A.A., A.S., etc.)
- Bachelor's degree (B.A., B.S., etc.)
- Master's degree (M.A., M.S., M.B.A., etc.)
- Doctoral or professional degree (J.D., Ph.D., Ed.D., D.Ph., M.D., etc.)

**11. What is your current marital status?**

- Single, never married
- Married for the first time
- Remarried (was divorced or widowed)
- Legally separated (or filing for divorce)
- Divorced
- Widowed

**12. Are there children under the age of 21 living in your household?**

- Yes
- No

**13. About how many years have you been an Internet user (including all time such as at home, at work, in school)?**

- Not applicable; I do not use the Internet
- 6 months or less
- 1 year
- 2 years
- 3 years
- 4 years
- 5 or more years

## TELEWORK

Telework (also known as flex hours, telecommuting, and work-at-home) is defined by the federal government as “the ability to do your work at a location other than your ‘official duty station.’” This generally involves using computers and high-speed networks to allow employees to work from almost anywhere.

**14. (IF YOU ARE SHORE-BASED) In the past year (12 months) or while on shore duty (whichever is shorter), have you teleworked at least one day?**

- Yes
- No

**15. (IF YOU ARE SHORE-BASED) Do you know of someone at your command who has teleworked at least one day in the past year (12 months) or while you have been at this command (whichever is shorter)?**

- Yes
- No

**16. (IF YOU ARE SHORE-BASED) If allowed at your current command, would you be interested in teleworking?**

- Yes
- No
- Don't know

**17. (IF YOU ARE NOT SHORE-BASED) In the last year at your previous shore command, did you telework at least one day?**

- Not applicable; have not yet been on shore duty
- Yes
- No

**18. (IF YOU ARE NOT SHORE-BASED) In the last year at your previous shore command, did you know of someone there who had teleworked at least one day?**

- Not applicable; have not yet been on shore duty
- Yes
- No

**19. (IF YOU ARE NOT SHORE-BASED) If allowed at your next shore-based command, would you be interested in teleworking?**

- Yes
- No
- Don't know

**20. How would the ability to telework impact your desire to stay in the Navy?**

- It would motivate me to remain in the Navy
- It would have no impact on my motivation to remain in the Navy
- It would motivate me to leave the Navy

**21. (IF YOU ARE SHORE-BASED) Do you believe teleworking (at least one day a pay period) is possible in your current job?**

- Yes
- No
- Don't know

**22. (IF YOU ARE NOT SHORE-BASED) Do you believe teleworking (at least one day a pay period) was possible at your last shore-based job?**

- Not applicable; have not yet been assigned to shore-based command
- Yes
- No
- Don't know

**GENERAL TECHNOLOGY**

**23. Do you PERSONALLY own...**

Yes		No
a. A desktop computer	<input type="radio"/>	<input type="radio"/>
b. A laptop computer	<input type="radio"/>	<input type="radio"/>
d. A Blackberry, Palm or other personal digital assistant (not part of a cell phone)	<input type="radio"/>	<input type="radio"/>
c. A cell phone	<input type="radio"/>	<input type="radio"/>
e. An iPod or other MP3 player (not part of a cell phone)	<input type="radio"/>	<input type="radio"/>
f. A digital camera (not part of a cell phone)	<input type="radio"/>	<input type="radio"/>
g. A camcorder	<input type="radio"/>	<input type="radio"/>
h. A webcam	<input type="radio"/>	<input type="radio"/>
i. An e-book reader (e.g., Kindle, eBookwise, e-Book Reader)	<input type="radio"/>	<input type="radio"/>

**24. (IF DON'T OWN DESKTOP OR LAPTOP COMPUTER) Why don't you own a computer? (Mark ALL that apply.)**

- I use one at work so don't want one at home
- Too expensive to buy/maintain
- Too confusing or hard to use
- Don't need it for anything at home
- Other \_\_\_\_\_

GO TO QUESTION 26.

**25. (IF OWN DESKTOP OR LAPTOP COMPUTER) Do you have Internet connectivity at home?**

- Yes, through a dial-up connection – Go to Question 29
- Yes, through a high-speed connection (cable, satellite, DSL, etc.) – Go to Question 29
- No – Go to Question 30

**26. (IF DON'T OWN DESKTOP NOR LAPTOP COMPUTER) Do you have access to a desktop or laptop computer at home (e.g., a roommate's computer)?**

- Yes – Go to Question 28
- No

**27. (IF DON'T OWN DESKTOP NOR LAPTOP COMPUTER AND NO TO PREVIOUS) Do you use a desktop or laptop computer somewhere other than home or work at least on an occasional basis (e.g., at a friend's house, library, etc.)?**

- Yes
- No – Go to Question 71

**28. (IF Q26=Yes or Q27=Yes) Do you use the Internet on that computer?**

- Yes, through a dial-up connection
- Yes, through a high-speed connection (cable, satellite, DSL, etc.)
- Yes, but don't know how it connects
- No – Go to Question 30

**29. (IF Q25=Yes or Q28=Yes) Do you use a wireless router/access point to connect to the Internet?**

- Yes
- No
- Don't know

**30. (IF DON'T HAVE INTERNET on Q25 and Q28) Why don't you have Internet connectivity at home?**

- Too expensive
- Don't need to access the Internet
- Preferred connection (e.g., high speed) not available
- Other \_\_\_\_\_

**31. (IF HAVE ANY COMPUTER ACCESS) Do you have a Common Access Card (CAC) reader?**

- Yes
- No – Go to Question 34

**32. (IF HAVE CAC READER) Do you use your CAC and CAC reader to access your NMCI email via Outlook Web Access (OWA)?**

- Yes
- No

**33. (IF HAVE CAC READER) Do you use your CAC and CAC reader to access Navy or DOD websites (other than OWA)?**

- Yes
- No

**COMPUTER USE OUTSIDE OF WORK**  
(If own a computer or laptop, or have access to a computer outside of work)

**NOTE: If you are currently deployed away from home, please answer the following questions based on when you were last home before the deployment.**

**34. In the last 30 days, how often did you use a computer (desktop or laptop) when you were not at work (e.g., at home, at the library, on your free time)?**

- Several times a day
- About once a day
- 3 to 5 days a week
- 1 to 2 days a week
- Every few weeks
- Less often
- Never – Go to Question 38

**35. What type of laptop or desktop computer was it that you used most regularly during the last 30 days?**

- Apple
- PC
- Other
- Don't know

**36. What operating system was running on that computer?**

- Mac OS X
- Other Mac operating system
- Windows Vista
- Windows XP
- Other Windows operating system
- Unknown

**37. In the last 30 days, what did you do on your home computer? (Mark ALL that apply.)**

- Word processing
- Spreadsheets/financial worksheets
- Worked with photos or other graphics files
- Watched a DVD
- Played computer games
- Accessed the Internet for any purpose (search, email, instant messages/chat, social networking, etc.)
- Prepared items for the Internet (designed web pages, etc.)
- Managed my household appliances or networked systems (e.g., lights, refrigerator, etc.)
- Worked on something for my Navy job
- Other \_\_\_\_\_

(NOTE – if don't access Internet, skip to AUDIO/VISUAL section, Question 57)

**38. (IF OWN DESKTOP OR LAPTOP COMPUTER or have access to roommate's) In the last 30 days, how often did you use the Internet from home?**

- Several times a day
- About once a day
- 3 to 5 days a week
- 1 to 2 days a week
- Every few weeks
- Less often
- Never – Go to Question 57

**39. (IF ANYTHING BUT NEVER TO PREVIOUS) What web browser did you use most regularly during the last 30 days?**

- Internet Explorer
- Firefox
- Safari
- Other
- Unknown

**40. (IF ACCESSED INTERNET) In the last 30 days, which of the following devices did you commonly use to access the Internet? (Mark all that apply.)**

- Desktop computer
- Laptop computer
- Cell phone
- PDA or Personal digital assistant (incl. Palm Pilot, Handspring)

## SOCIALIZING

**41. In the last 30 days, did you send or receive any email (at home, at work, etc.)?**

- Yes
- No

**42. In the last 30 days, which of the following devices did you use to send and receive email? (Mark all that apply.)**

- Desktop computer
- Laptop computer
- Cell phone
- PDA or Personal digital assistant (incl. Palm Pilot, Handspring)
- Wireless email device like Blackberry

**43. (IF OWN DESKTOP OR LAPTOP COMPUTER) Do you have email access at home?**

- Yes
- No – Go to Question 45

**44. (IF OWN DESKTOP OR LAPTOP COMPUTER) What type of email account do you use most often?**

- A web-based account (e.g., Gmail, Hotmail)
- An account through my Internet Service Provider (ISP)
- Both types of accounts

**45. (IF OWN DESKTOP OR LAPTOP COMPUTER) Have you ever subscribed to an electronic mailing list?**

- Yes
- No
- Don't know

**46. Have you ever created your own profile online that others can see, like on a social networking site like MySpace or Facebook?**

- Yes
- No – Go to Question 48

**47. (IF YES TO PREVIOUS) Is your profile currently visible to the general public?**

- Yes
- No

**48. In the last 30 days, about how often did you visit social networking sites?**

- Several times a day
- About once a day
- 3 to 5 days a week
- 1 to 2 days a week
- Every few weeks
- Less often
- Never – Go to Question 50
- Don't know

**49. What are the different ways you use social networking sites? Do you ever use those sites to...? (Mark all that apply.)**

- Make new friends
- Stay in touch with friends you see a lot
- Stay in touch with friends you rarely see in person
- Make plans with your friends
- Stay in touch with professional contacts
- Stay in touch for educational purposes (e.g., with your classmates)

**50. Do you have an online journal or blog?**

- Yes
- No

**51. In the last 30 days, have you read an online journal or blog of someone else?**

- Yes
- No
- Don't know

**52. Have you ever contributed to a wiki (e.g., Wikipedia)?**

- Yes
- No

**53. In the last 30 days, did you chat (text only) with someone (e.g., using AIM, Gmail, etc)?**

- Yes
- No – Go to Question 55

**54. What did you use to chat? (Mark all that apply.)**

- Computer/laptop
- Cell phone
- Non-cell phone PDA
- Other \_\_\_\_\_

**55. In the last 30 days, did you talk through the Internet (e.g., using Skype, Vonage, GoogleTalk) to someone?**

- Yes
- No

**56. In the last 30 days, did you visit an online virtual world such as Second Life (not as part of a game)?**

- Yes
- No

#### AUDIO/VISUAL

**57. In the last 30 days, which of the following devices did you use to listen to music or radio shows/podcasts, aside from a radio? (Mark all that apply.)**

- Not applicable; only listen to music on the radio
- Desktop computer
- Laptop computer
- Walkman/CD player
- Cell phone
- iPod or other MP3 player
- Non-cell phone PDA or Personal digital assistant (e.g., Blackberry, Palm Pilot, Handspring)

**58. In the past 30 days, did you listen to a podcast?**

- Yes
- No

**59. Have you ever listened to the CNO's podcast?**

- Yes
- No

**60. Do you have your own podcast?**

- Yes
- No

**61. In the last 30 days, which of the following devices did you use to take digital still photos (not video)? (Mark all that apply.)**

- Not applicable; did not take any digital still photos
- Digital camera
- Camcorder
- Cell phone

**62. Do you ever...**

Yes		No
Share your digital photos through email	<input type="radio"/>	<input type="radio"/>
Post your digital photos on the Internet for people to see (e.g., Flickr, Shutterfly)	<input type="radio"/>	<input type="radio"/>
View digital photos others had posted on the Internet	<input type="radio"/>	<input type="radio"/>
Copy your digital photos onto CDs or other removable media (DVD, thumb drive, external hard drive, etc)	<input type="radio"/>	<input type="radio"/>

**63. In the last 30 days, which of the following devices did you use to watch TV shows, news programs, or movies, aside from your television at home? (Mark all that apply.)**

- Not applicable; don't watch TV shows
- Not applicable; only use a TV
- Desktop computer
- Laptop computer
- Cell phone
- iPod or other MP3 player
- PDA or Personal digital assistant (incl. Palm Pilot, Handspring)
- Portable DVD player

**64. (IF OWN WEBCAM) In the last 30 days, have you placed live images (streaming video) on the Internet using your webcam?**

- Yes
- No

**65. In the last 30 days, what did you use to record your own video? (Mark all that apply.)**

- Not applicable; don't record video
- Camcorder
- Cell phone
- PDA

**66. Do you ever...**

Yes		No
Share your videos through email	<input type="radio"/>	<input type="radio"/>
Post your videos on the Internet	<input type="radio"/>	<input type="radio"/>
Watch videos on a video-sharing site like YouTube or GoogleVideo	<input type="radio"/>	<input type="radio"/>
View live images online of a remote location or a person, using a webcam	<input type="radio"/>	<input type="radio"/>
Copy your videos onto DVDs or other removable media (thumb drive, external hard drive, etc.)	<input type="radio"/>	<input type="radio"/>

**OTHER**

**67. Have you ever BOUGHT anything online (e.g., clothing, music, videos, books)?**

- Yes
- No

**68. Have you ever SOLD anything online (e.g., clothing, music, videos, books)?**

- Yes
- No

**69. Have you ever used online banking?**

- Yes
- No

**70. Have you ever taken any educational courses online?**

- Yes – Go to Question 72
- No

**71. Do you plan to take any educational online courses in the future?**

- Yes
- No
- Don't know

**72. (IF 20 YRS OLD OR LESS AND A HIGH SCHOOL GRADUATE)**  
**While in your senior year of high school, how often did you do each of the following?**

	Several times a day	About once a day	3 to 5 days a week	1 to 2 days a week	Every few weeks	Every few months	Never
Send email	<input type="radio"/>						
Access a social networking site (e.g., MySpace, Facebook)	<input type="radio"/>						
Read someone else's online journal or blog	<input type="radio"/>						
Write an online journal or blog	<input type="radio"/>						
Chat or IM	<input type="radio"/>						
Talk online (e.g., through Skype, Vonage)	<input type="radio"/>						
Access a virtual world (e.g., SecondLife)	<input type="radio"/>						

**WORK COMPUTERS**

**73. How often does your Navy job require you to use a computer (desktop or laptop)?**

- Several times a day
- About once a day
- 3 to 5 days a week
- 1 to 2 days a week
- Every few weeks
- Less often
- Never

**74. Do you have your own computer workstation?**

- Yes
- No, I share with others
- No, I have no computer access at work – Go to Question 86

**75. How satisfied are you with the work computer itself (i.e., speed, monitor size, etc.) you usually use?**

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied

**76. How satisfied are you with the software on the computer you usually use?**

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied

**77. Does the computer you usually use have all the software you need to do your job?**

- Yes
- No
- Don't know

**78. Which network below would you consider your primary network at work?**

- NMC1
- IT-21
- ONENET
- Legacy
- Other service (non-Navy)
- Other
- Unknown

**79. How satisfied are you with that primary network?**

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied

**80. Do you personally have access to the Internet (through NIPRNET) at your Navy job (i.e., you can personally send/receive email, view information on the World Wide Web, or do other related activities on the Internet)?**

- Yes, I have access at my own computer workstation
- Yes, I have access at a computer workstation I share with others at my command
- No
- Don't know

**81. How accessible is the World Wide Web (WWW)?**

- Constant – the WWW is always or nearly always available to me
- Intermittent – the WWW is sometimes available, but not always "up"
- Rarely – the WWW is almost never or rarely available to use

**82. How often do you use your web access at work per week?**

- Several times a day
- About once a day
- 3 to 5 days a week
- 1 to 2 days a week
- Every few weeks
- Less often
- Never – Go to Question 84

**83. How satisfied are you with your current Internet access at work?**

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied

**84. Do you have unclassified email access at work?**

- Yes
- No – Go to Question 86

**85. How often do you access your unclassified email at work per week?**

- Several times a day
- About once a day
- 3 to 5 days a week
- 1 to 2 days a week
- Every few weeks
- Less often
- Never

**86. (IF DEPLOYED AND OWN A LAPTOP) During your current deployment, did you take your personal laptop with you?**

- Yes
- No, I would have but did not know I could
- No, wanted to but was told I could not
- No, did not want to

**87. (IF NOT CURRENTLY DEPLOYED AND OWN A LAPTOP) During your last deployment, did you take your personal laptop with you?**

- Not applicable, have never deployed
- Yes
- No, I would have but did not know I could
- No, wanted to but was told I could not
- No, did not want to

## NAVY INTERNET

**88. Web-based self-service initiatives (e.g., JCMS/CMS, Navy e-Learning, Navy College) are moving the Navy in the right direction.**

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

**89. Web-based self-service initiatives (e.g., JCMS/CMS, Navy e-Learning, Navy College) are useable while underway.**

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

**90. The Navy provides enough information on the web for me to make informed career decisions.**

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

**91. Where are you most likely to access career information?**

- At work
- Away from work

## ALERTS

**92. Do you ever get news or other information alerts automatically sent to you, for instance to your computer, cell phone, or PDA?**

- Yes
- No – Go to Question 94
- Don't know – Go to Question 94

**93. Where do you receive these alerts? (Mark ALL that apply.)**

- A desktop computer at home
- A desktop computer at work
- A laptop computer at home
- A laptop computer at work
- A personal cell phone
- A work cell phone
- A personal PDA
- A work PDA

**94. Have you subscribed to a website for updates (e.g., RSS feeds)?**

- Yes
- No
- Don't know

## VIDEO GAMES

**95. In the last 30 days, how often did you play video games, whether on a computer or the Internet or on a game console like Xbox?**

- Everyday or almost everyday
- A few times a week
- A few times a month
- Less often
- Never – Go to Question 99

**96. On a typical day, approximately how many hours do you spend playing video games?**

- Less than one hour

\_\_\_\_\_ hours

**97. When you play video games, do you play them on . . .**

- A desktop computer
- A laptop computer
- A game console (e.g., Xbox, Play Station, Wii)
- A portable gaming system (e.g., Sony PSP, Gameboy, Nintendo DS)
- Cell phone

**98. In the last 30 days, did you ever play video games. . .**

Yes		No
By yourself	<input type="radio"/>	<input type="radio"/>
With other people in the same location as you	<input type="radio"/>	<input type="radio"/>
With other people over the Internet	<input type="radio"/>	<input type="radio"/>

**99. (IF DEPLOYED) During your current deployment, did you take a portable gaming system (e.g., Sony PSP, Gameboy, Nintendo DS) with you?**

- Yes
- No, I don't own one
- No, I was told I could not
- No, did not want to

**100.(IF NOT CURRENTLY DEPLOYED) During your last deployment, did you take a portable gaming system with you?**

- N/A, have never deployed
- Yes
- No, I don't own one
- No, I was told I could not
- No, did not want to

**CELL PHONES AND PDAS**

**101.(IF OWN PDA) Does your PDA have the capability to. . .**

Yes		No	Don't Know
Take still pictures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play music or MP3 files	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Send and receive text messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Send and receive email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take video	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play video or TV programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play games	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surf the Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Run applications (e.g., word processing, spreadsheets)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**102. Do you currently have a work PDA (e.g., Blackberry)?**

- Yes
- No – Go to Question 104

**103. Does your work PDA have the capability to . . .**

Yes		No	Don't Know
Take still pictures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play music or MP3 files	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Send and receive text messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Send and receive email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take video	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play video or TV programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play games	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surf the Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Run applications (e.g., word processing, spreadsheets)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**104. What features of a PDA would be most beneficial for you at work? (Mark ALL that apply.)**

- Text messaging
- Email access
- Multimedia messaging (sending pictures, audio, and other attachments)
- Internet access
- Audio download
- Video download
- Applications (Word, Excel, etc.)
- Voice capabilities (e.g., cell phone)
- Other \_\_\_\_\_

**105. Do you currently have a work cell phone?**

- Yes
- No – Go to Question 107

**106. Does your work cell phone currently include text messaging?**

- Yes
- No

**107. (IF DON'T HAVE A PERSONAL CELL PHONE) Why don't you have a personal cell phone? (Mark ALL that apply.)**

- Not interested in having one
- Prefer regular phone (landline)
- Too expensive
- Too confusing
- Computer and regular phones can do all I need
- Concerned about health impact (e.g., potential radiation)
- Other \_\_\_\_\_

GO TO QUESTION 113.

**108. (IF OWN CELL PHONE) Does your personal (i.e., non-Navy) cell phone have the following features?**

Yes		No	Don't Know
Take still pictures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play music or MP3 files	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Send and receive text messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Send and receive email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take video	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play video or TV programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play games	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surf the Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Run applications (e.g., word processing, spreadsheets)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**109.(IF OWN CELL PHONE) What features do you currently pay for on your personal cell phone plan? (Mark ALL that apply.)**

- Text messaging
- Email access
- Multimedia messaging (sending pictures and audio messages)
- Internet access
- Audio download
- Video download
- Applications (e.g., word processing, spreadsheets)

**110.(IF OWN CELL PHONE) Which of the companies below is your service provider for your personal cell phone?**

- AllTel
- AT&T
- Sprint
- T-mobile
- Verizon
- A local provider (e.g., Bell South)
- Other prepaid or pay as you go options (e.g., TracFone)
- Other

**111.(IF PAY FOR TEXT MESSAGING) How many text messages are included on your plan?**

- Unlimited
- 100 or less
- 101-200
- 201-300
- More than 300

**112. (IF PAY FOR TEXT MESSAGING) In the last 30 days, how many text messages did you send?**

- None
- Less than 10 messages
- 10-29 messages
- 30-50 messages
- More than 50 messages

**(IF HAVE TEXT MESSAGING ON PERSONAL OR WORK PHONE) We are preparing to conduct the first ever Navy-wide survey through text messaging. This will consist of NO MORE THAN 11 total messages; 5 questions from us (plus a thank you) and 5 answers from you. Your responses are still covered by the Privacy Notice provided at the beginning of this survey. YOUR CELL PHONE NUMBER WILL NOT BE RETAINED OR REUSED FOR ANY PURPOSE OTHER THAN STATED ABOVE.**

**113. Are you interested in participating in this effort?**

- Yes
- No – Go to Question 115

**114. (IF YES) Please provide your 10-digit cell phone number below. This number will not be used for any purpose other than defined on the previous page.**

-----

**We will send the first text message to you by next Wednesday from (901) 451-1522. Simply reply to the message with the letter corresponding to your answer.**

**GO TO QUESTION 117.**

**115. Why don't you want to participate? (Mark all that apply.)**

- My cell phone is for my purposes only
- I don't want to use any of my message allowance
- I don't want the Navy to have my cell phone number
- I don't think that the texts will be limited to 11
- I think my cell phone number will be saved and used for other purposes
- Other \_\_\_\_\_

**116. If the Navy paid for text messaging or provided you with a cell phone with text messaging capability, would you participate in a survey through text messaging?**

- Yes
- No
- Don't know

**ATTITUDES TOWARD  
TECHNOLOGY**

**117. How well do these statements describe you?**

	Very well	Somewhat well	Not too well	Not at all
I like that cell phones and other mobile devices allow me to be more available to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often feel like my electronic devices can do more than what I actually use them for	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I get a new electronic device, I usually need someone else to set it up or show me how to use it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is stressful to own and manage all of the different electronic devices I have	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often feel annoyed by having to respond to intrusions from my electronic devices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I am more productive because of all of my electronic devices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**118. How much, if at all, have the technologies discussed in this survey improved...**

	A lot	Some	Only a little	Not at all
The way you pursue your hobbies or interests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your ability to do your Navy job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your ability to learn new things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your ability to keep in touch with friends and family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your ability to share your ideas and creations with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your ability to work with others in your community or in groups you belong to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**119. How well does each statement reflect your beliefs about the technologies discussed on this survey?**

	Completely true of me	Somewhat true of me	Not at all true of me
Knowing how to use technology is a necessary skill for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like using technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident with my ability to learn about technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with technology makes me nervous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like using technology in my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wish I could use technology more frequently at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology makes me feel stupid.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm not the type to do well with technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel uncomfortable using most technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with technology is boring.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know that if I work hard to learn about technology, I will do well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think using technology will be difficult for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology makes me feel uneasy and confused.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Once I start using technology, I will find it hard to stop.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology gives me more control over my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology overloads me with too much information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology makes my life easier.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**120. How often have you given false information about yourself. . .**

	Never	Only a few times	Often	Always
When registering on a website?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When providing feedback on a website?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a social networking site (e.g., MySpace, Facebook)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**121. When thinking about technology, what one thing could the Navy do to improve your quality of life? (Note: Only 1,000 characters allowed.)**

**122. When thinking about technology, what one thing could the Navy do to improve the quality of your work life? (Note: Only 1,000 characters allowed.)**

**123. Do you have any additional comments about the topics in this survey? (Note: Only 1,000 characters allowed.)**

**Thank you for your time and input!**

**Appendix D:  
Notification and Reminder Letters**



LETTERHEAD

<<name>>  
<<address1>>  
<<address2>>  
<<address3>>  
<<address4>>

Dear <<name>>,

The Chief of Naval Operations (CNO) has indicated that he wants the Navy “to be recognized as one of the top 50 employers” (SNA symposium, Jan 08). As part of this, I have set up a task force to look at the balance between work and life, and telework is one initiative being explored. You are one of a SELECT group who is being asked to complete the Navy Telework and Technology Survey.

While teleworking is not right for everyone or every job, results of this survey will help us better understand and expand technology capabilities in the Navy to assist in balancing your work and life. Questions on the survey ask about your interest in teleworking as well as your familiarity with a number of web-based programs and handheld options that the Navy may be able to adopt to better enable teleworking, including wikis, blogs, social networking, Blackberries, and text messaging. Most of these are not currently available on Department of Defense computers, so the questions pertain to your familiarity outside of work.

Participation is voluntary, but YOUR feedback is important in providing an accurate data picture of the Navy Total Force. Your answers will not be attributed to you personally; only overall results will be provided.

The survey should take about 30 minutes of your time to complete. The survey is available online at <http://XXXXXXXXXX> . Your user ID to access this survey is:

User ID: <<userid>>

Please take the time to complete the survey **now** while you are thinking of it. Thank you in advance for helping me to help you. If you have any questions, please contact the Project Director, Zannette Uriell, at DSN 882-4641, (901) 874-4641, [zannette.uriell@navy.mil](mailto:zannette.uriell@navy.mil).

Sincerely,

TCFO 'O 0G0HGTI WUQP.' 'KK'  
Ej kgh'qh'P cxcrn'Rgtuqppgn'

BUPERS MILLINGTON LETTERHEAD

«address1»  
«address2»  
«address3»  
«address4»  
«address5»

Dear <<name>>:

A few weeks ago, you should have received a letter from the Chief of Naval Personnel (CNP), VADM Ferguson, asking you to complete the Telework and Technology Survey online. If you have already completed the survey, I apologize for this notification and sincerely thank you for your time. No further action is necessary.

If you have not completed the survey, please do so right away at <http://www.nprst.navy.mil/surveys/tandt/>. The Telework and Technology Survey is interesting and should take only about 30 minutes, and your information is vital to ensuring that our results provide an accurate picture of opinions about telework and technology in the Navy. Your user ID for this survey is:

**User ID:** <<userid>>

Participation is voluntary; however, I ask that you take a few moments to complete the survey so we can better inform CNP on Navy opinions about technology. If you have any questions, please contact the Project Director, Zannette Uriell, at [zannette.uriell@navy.mil](mailto:zannette.uriell@navy.mil), (901) 874-4641, or DSN 882-4641. Thank you again for your time and effort!

Sincerely,

David L. Alderton, Ph.D., Director  
Navy Personnel, Research, Studies, and Technology  
Bureau of Naval Personnel

BUPERS MILLINGTON LETTERHEAD

«address1»  
«address2»  
«address3»  
«address4»  
«address5»

Dear <<name>> :

About a month ago, you should have received a letter from the Chief of Naval Personnel (CNP), VADM Ferguson, asking you to complete the Telework and Technology Survey online. I know that work and life can be hectic, so I wanted to take a moment to remind you of your opportunity to participate in this survey.

If you have already completed the survey, I apologize for this notification and sincerely thank you for your time. No further action is necessary.

If you have not completed the survey, please do so right away at <http://www.nprst.navy.mil/surveys/tandt/>. If you have difficulties accessing this site, you may instead use our commercial site at <https://www.nprstsurveys.com/tandt/>. Your input is vital to ensuring that our results provide an accurate picture of telework and technology opinions in the Navy for the CNP. Your user ID for this survey is:

**User ID:** <<userid>>

Participation in the survey is voluntary, however, I ask you to please complete the survey to ensure we have an accurate picture of Navy opinions on telework and technology. If you do not want to participate and do not want any additional reminders about the survey, please send an email by 5 December to [zachary.ducksworth@navy.mil](mailto:zachary.ducksworth@navy.mil) and he will remove your name from the mailing list for this survey.

If you have any questions, please feel free to contact the Project Director, Zannette Uriell, at [zannette.uriell@navy.mil](mailto:zannette.uriell@navy.mil), (901) 874-4641, or DSN 882-4641. Thank you again for your time and effort!

Sincerely,

David L. Alderton, Ph.D., Director  
Navy Personnel, Research, Studies, and Technology  
Bureau of Naval Personnel

BUPERS MILLINGTON LETTERHEAD

«address1»  
«address2»  
«address3»  
«address4»  
«address5»

Dear <<name>>:

By now you should have received an invitation from the Chief of Naval Personnel (CNP), VADM Ferguson, to participate in the Telework and Technology Survey. The survey will only be available until 15 January. This is your final opportunity to participate in this survey.

If you have already completed the survey, I apologize for this notification and sincerely thank you for your time. No further action is necessary.

If you have not already completed the survey, you may do so at either of our websites (<http://www.nprst.navy.mil/surveys/tandt/> or <https://www.nprstsurveys.com/tandt/>). If you are not able to access either site, you may request an email version of the survey from the Project Director, Zannette Uriell at [zannette.uriell@navy.mil](mailto:zannette.uriell@navy.mil).

Your assistance is vital to guarantee we have an accurate picture of opinions on telework and technology in the Navy. Your user ID for this survey is:

**User ID: <<userid>>**

Participation in the survey is voluntary, but your answers are crucial to ensuring that we have an accurate picture of opinions about telework and technology in the Navy. If you have any questions, please feel free to contact the Project Director, Zannette Uriell, at [zannette.uriell@navy.mil](mailto:zannette.uriell@navy.mil), (901) 874-4641, or DSN 882-4641. Thank you again for your time and effort!

Sincerely,

David L. Alderton, Ph.D., Director  
Navy Personnel, Research, Studies, and Technology  
Bureau of Naval Personnel

## **Appendix E: Lightning Poll Questions**



## Navy-wide Lightning Poll – SMS portion

1/5. How satisfied are you with your Navy job? . . . .  
a. Satisfied. . . .  
b. Neither. . . .  
c. Dissatisfied

4/5. How satisfied are you with the amount of stress in your life? . . .  
p. Satisfied. . .  
q. Neither. . .  
r. Dissatisfied

2/5. How satisfied are you with mgmt support of quality of work life programs (eg, telework)? . .  
f. Satisfied. .  
g. Neither. .  
h. Dissatisfied

5/5. Was this survey easy to do? . . .  
u. Yes. . .  
v. No. . .  
w. No opinion

3/5. How would you rate the overall morale of your present command? . . .  
k. High. . .  
l. Medium. . .  
m. Low

Survey complete, thank you for your time!



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